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ALSO

BULLETIN No. 1

OF THE

HOWE LABORATORY OF OPHTHALMOLOGY

OF THE

HARVARD MEDICAL SCHOOL

**A BIBLIOGRAPHY OF
HEREDITARY EYE DEFECTS**

Collected by

LUCIEN HOWE

CAMBRIDGE, MASS.

FELLOW ROYAL SOCIETY OF MEDICINE

FORMER PRESIDENT AMERICAN OPHTHALMOLOGICAL SOCIETY

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COLD SPRING HARBOR, LONG ISLAND, N. Y.

AND

CAMBRIDGE, MASS.

February, 1928



AMERICAN FOUNDATION
FOR THE BLIND INC.



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EXPLANATION

A word is in order to explain why it seems worth while to publish the following disconnected lists of titles. Even a decade ago, a list was collected by the present writer, and published by the Eugenics Record Office of the Carnegie Institution. Now, after more than half a century of active practice of ophthalmology it has been decided to give up all clinical work in order to search for causes of disease, which have been too long overlooked. In the attempt to do that, one is immediately confronted with innumerable problems, which urgently invite investigation. In this multitude of attractions one finds that he has to do with two factors. One is the patient himself, including his heredity or "constitution," and the other, the "environment," understanding that to include even all treatment. In order to begin at the beginning, a study of heredity is really the first foundation stone.

For that purpose we should know what earlier workers have done. Hence this Bibliography of Hereditary Eye Defects.

In introducing each section a brief statement is made concerning the rule of inheritance of the defect in question. It must be understood that the line of descent is not *always* that which is indicated by the word of comment.

A character is said to be "*Dominant*" when it appears in each generation, that is, when every person affected has at least one parent showing the defect.

A "*Recessive*" may skip one or more generations.

A "*Sex-linked*" character is one which is expressed generally in the male, and ordinarily is passed from grandfather through his unaffected daughters to one of his grandsons.

To this edition have been added 121 new titles, also titles concerning eye defects collected in Vol. I of the *Bibliographia Eugenica* (supplement to the *Eugenical News*) in 1927.

LUCIEN HOWE,

Laboratory of Ophthalmology, Harvard Univ.

BOSTON, MASSACHUSETTS,
February 15, 1928.

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1. Bibliographies of Hereditary Eye Defects

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1916. **Libby, G. F.** Heredity in Ophthalmology. *Amer. Encyclopedia of Ophthalmology*, vol. VIII, p. 5812.
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2. General Considerations

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1906. **Nettleship, Edward.** Some hereditary diseases of the eye. *Ophthalmoscope*, Sept.-Oct. Quoted by Lawford.
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1909. **Crzelltzer, A.** Methoden der Familienforschung. *Zeitsch. f. Ethnologie*. Heft. 2, XLI, 181-198.
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1927. Macklin, Madge T. Hereditary abnormalities of the eye. V. Inheritable defects of the iris and lens. Canadian Med. Assn. J., 17 (8): 937-942. 7 ped. charts from literature, bibl. (Aniridia, coloboma iridis, ectopia lentis, cataract.)

3. Blindness

(See also Sections 41, 57, 58)

1870. **Zehender, W.** Die Blinden in den Grossherzogthümern Mecklenburg. Klin. Monatsbl. f. Augenheilk. Abst. in Nagel's Jahresbericht.
1874. **Katz.** Beitrag zur Blinden-Statistik. Berlin klin. Wochensch., Nos. 23, 24, S. 271-274; 282-286. (No chart. Some tables.)
1883. **Magnus, H.** Die Blindheit, ihre Entstehung und ihre Verhütung. Breslau.
1885. **Fuchs, Ernst.** Die Ursachen und die Verhütung der Blindheit. Wiesbaden.
1886. **Magnus, H.** Die Jugend-Blindheit. Wiesbaden.
1886. **Zepler, B.** Ueber den Einfluss der Verwandten-Ehe auf die Nachkommenschaft mit besonderer Berücksichtigung der congenitalen Blindheit. Inaug. Diss. Breslau.
1889. **Roth, M.** Report of the British Royal Comm. on the Condition of the Blind. Quoted in the 35th Ann. Report of the Ontario Inst. for the Education of the Blind, 1906.
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1914. **Harman, N. B.** Causes of Blindness in Eleven Hundred Children. (1 ill.) Brit. Med. Jour., Aug. 29, p. 390.
1914. **Talbut.** Blindness in Tonkin. Ann. d'Hyg. et de Med., v. 16, p. 1218.
1915. **Grimsdale, H. B.** Necessity for an Exact Definition of Blindness. Roy. Soc. Med., Ophth. Sec., Dec. Arch. of Ophth., 44, p. 205. Amer. Jour. Ophth., 32, p. 56.
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1917. **Charles, J. W.** Need for Thorough Examination into Family History and Search for Disease in Applicants for Admission into Schools for Blind. Jour. Missouri State Med. Assn., v. 14, p. 430.
1918. **Lewis, F. Park.** (Reports marriage of two blind persons with large progeny of blind.) Transact. Sec. of Oph., Am. Med. Assn., 1918, p. 75.
1921. Report of the Committee on the Prevention of Hereditary Blindness. (Bericht des Ausschusses zur Verhütung der erblichen Blindheit.) Trans. of the Sect. on Ophthalmol. of the Amer. Med. Assoc., 27th Ann. Sess., Boston, 6-10, VI, p. 329-338.

4. Eyelids (General)

1924. **Volmer, W.** Erbliche, abnorme Mitbewegung des Oberlides. (Abnormal, heritable concomitant movement of the upper eyelid.) Kl. Monatsbl. f. Augenhk., 73: 135-149, 1 ped. chart, bibl.

1927. **Macklin, Madge T.** Hereditary abnormalities of the eye. II. Inheritable defects involving the eyelids and their mode of transmission. *Canadian Med. Assn. J.*, 17 (1): 55-60, 2 ped. charts, 3 photos., bibl. (Charts from the literature. Ptosis, lagophthalmus, cryptophthalmus, epicanthus, distichiasis, dark underlids, fat hernia of lids considered.)

5. Distichiasis and Discoloration of Lids

Rule of Inheritance: Imperfect Dominant

(See also Section 4)

1898. **Wood, Casey.** Zwei Fälle von kongenitaler Distichiasis. *Chicago Ophthal. and Otol. Soc.*, II, Oct. Ref. in *Die Ophthal. Klinik*, III, S. 95.
1899. **Westhoff, C. H. A.** Distichiasis congenita hereditaria. *Nederl. Oogh. Bijdr.*, Lief. VIII, S. 69.
1920. **Peters, R.** Dark Color of Under Lid and Heredity. *Centralb. f. p. Augenh.*, v. 42, pp. 8-12.

6. Ptosis with Epicanthus

(See also Sections 4, 60)

1885. **Hirschberg, J.** Ueber den Zusammenhang von Epicanthus und Ophthalmoplegia. *Neurol. Centralbl.*, S. 294.
1889. **Vignes.** Epicanthus héréditaire. *Rec. d'Ophth.*, Paris, pp. 422-425, 3d series, XI.
1896. **Lafosse.** Anophthalmie bilatérale et épicanthus chez un enfant dont la mère présentait l'absence congénitale du globe oculaire droit. *Presse med. belge.*, June 21, and *Arch. of Ophth.*, XXV. Ref. in *Arch. f. Augenh.*, XXXIII, S. 245.
1897. **Sattler, Robert.** Congenital epicanthus and ptosis. *Trans. of the Amer. Ophthal. Soc.*, p. 96.
1898. **Steinheim.** Epicanthus mit Ptosis und die Heredität. *Centralbl. f. prakt. Augenh.*, S. 249.
1913. **Cobbledick, A. S.** Congenital deformity of inner canthus. *Proceedings of the Royal Society of Medicine*, March, p. 62 (Chart).

7. Coloboma of Eyelids

Rule of Inheritance: Uncertain

1889. **Berry.** Note on congenital defect of the lower lid. *Royal Ophthal. Hospital Reports*, XII, 3, p. 255.
1915. **Buchanan, M.** Coloboma of Eyelid. *Tr. Coll. Phys.*, Phila., 36, p. 312.
1916. **Baker, L. K.** Coloboma of Eyelid. *Ohio State Med. Jour.*, v. 12, No. 5.
1917. **Posey, W. C.** Bilateral Coloboma of Lower Lids. *Penn. Med. Jour.*, v. 21, p. 203.
1927. **Isakowitz, J.** Eine seltene erbliche Anomalie der Lidspalte [atypisches Lidkolobom?]. (A rare heritable anomaly of the palpebral fissure—atypical coloboma of the eyelids.) *Kl. Monatsbl. f. Augenh.*, 78 (4): 509-512, 2 photos., bibl. (An inherited malformation, probably dominant, on a degenerative basis. No analogous case found in the literature. Best described as atypical coloboma.)

8. Hereditary Blepharophimosis

Rule of Inheritance: Uncertain

1914. **Ichikawa.** Family Blepharophimosis. Nippon Gank. Zasshi, Oct.

9. Abnormal Tear Passages

Rule of Inheritance: Irregularly Dominant

1876. **Emmert, Emil.** Ophthalmologische Mitteilung. Angeborenes Fehlen aller 4 Thränenpunkte und Thränenröhrchen. Arch. f. Augen. u. Ohrenheilk., v. 2, S. 399.
1883. **Nieden, A.** Ueber das Vorkommen und die Erbllichkeit von Erkrankungen der Thränenableitungsorgane. Centralb. f. prakt. Augenheilk., S. 301.
1886. **Nieden, N.** Ueber den Zusammenhang von Augen und Nasenaffektionen. Arch. f. Augenheilk., XVI, S. 387-389.
1892. **Peters, A.** Zur Behandlung der Thränenschlauchatresie der Neugeborenen. Klin. Monatsbl. f. Augenheilk., S. 363-370.

10. Eyeball (General)

1921. **Koyanagi, Y.** Embryologische Untersuchungen über die Genese der Augenkolobome und des Mikrophthalmus mit Orbitalcyste. (Univ.-Augenklin., Sendai, Japan.) v. Graefe's Arch. f. Ophthalmol., Bd. 104, H. 1/2, S. 1-35.
1925. **Selter, E. M.** Ueber familiäres Auftreten von Melanosis bulbi. (The familial occurrence of melanosis bulbi.) Monatsch. f. Kinderhik., 31: 587-596. (General discussion with review of the literature followed by description of 4 cases in 2 generations of a family of European stock. The pigment flecks lie in the surface of the sclera, showing their relation to blood and lymph vessels. Eye backgrounds and iris like those in a negro.)
1927. **Macklin, Madge T.** Hereditary abnormalities of the eye. III. Anomalies of the entire eyeball. (Section 1) Canadian Med. Assn. J., 17 (3): 327-331; (Section 2) Ibid., (4): 421-423, 3 ped. charts, 2 tabs., bibl. (Illustrative pedigree charts from the literature. Consideration of microphthalmus, hydrophthalmus and glaucoma. Formulation of 8 rules to aid in interpretation of a sex-linked recessive character.)

11. Microphthalmus and Anophthalmus

Rule of Inheritance: Uncertain; Usually Dominant

(See also Section 10)

1874. **Page, H.** Transmission through three generations of microphthalmus, irideremia, and nystagmus. Lancet, August 8, p. 193.
1876. **v. Hasner.** Sechs Fälle von Anophthalmus congenitus. Prag. Viertelj., Bd. 130, S. 55. Abst. in Nagel's Jahresbericht.
1877. **Landesberg, M.** Vier Fälle von Anophthalmus congenitus. Klin. Monatsbl. f. Augenheilk., S. 141.
1880. **Berlin.** Angeborene Orbitalcyste mit Mikrophthalmus. Graefe-Saemisch Handbuch d. ges. Augenheilk., I Auf. Bd. VI, S. 686. Quoted by Natanson.
1880. **Manz, W.** Zwei Fälle von Mikrophthalmus congenitus, u. s. w. Arch. f. Ophth., Bd. XXVI, 1, S. 154.

1880. **Ravà, G.** Erfolgreiche doppelseitige Cataract-extraction bei hochgradigen hereditären Mikrophthalmus. *Centralbl. f. prakt. Augenheilk.*, S. 456.
1882. **Mayerhausen, J.** Direkte Vererbung eines beiderseitigen Mikrophthalmus. *Centralbl. f. prakt. Augenheilk.*, S. 97-106.
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1894. **Purtscher, S.** Ueber Mikrophthalmus mit Cysten im oberen Lid. *Int. Klin. Rundschau*, No. 43.
1898. **Reber, W.** Microphthalmie compliqué d'hypermetropie excessive et d'anomalies de la macula, observés chez trois soeurs. *Annal d'Oculist.*, T. CXIX, p. 445.
1898. **Westcott, C.** An additional case of double congenital microphthalmus. *Journ. A. M. A.*, Sept. 24, p. 711.
1899. **Bruns, H. D.** A microphthalmic family. *Amer. Journ. of Ophthal.*
1901. **Brose, L. D.** Congenital right-sided anophthalmus and left-sided microphthalmus. *Arch. of Ophthal.*, XXX, p. 12.
1902. **Bronner, A.** Two families with congenital microphthalmus and cataract. *Ophthal. Review*, p. 207.
1903. **Best, F.** Enophthalmis congenitus. Bericht d. Oberhess. Gesell. f. Natur- und Heilkunde in Giessen, S. 60. Abst. in Nagel's Jahresbericht.
1903. **Ridley, N. C.** Congenital anophthalmus. *Ophthal. Review*, p. 55.
1908. **Natanson, L.** Ueber Mikrophthalmus und Anophthalmus congenitus mit serösen Orbitopalpebralcysten. *Arch. f. Ophthal.*, LXVII, 2, S. 185.
1909. **von Hippel, E.** Die Missbildungen des Auges; in E. Schwalbe: Missbildungen des Menschen. III, Theil, 1 Lief., 2 Abth.
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1913. **Thomsen, C.** Ueber die Vererbung des Mikrophthalmus mit und ohne Katarakt. Inaug. Diss. Rostock. Abst. in *Ophthalmic Literature*, p. 122, 1915.
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1916. **Souques, A.** Familiar Anophthalmus. *Rev. Neurol. Paris*, v. 22, p. 1219.
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1921. **Usher, C. H.** A pedigree of microphthalmia with myopia and corectopia. (Ein Stammbaum von Mikrophthalmie mit Myopie und Korektomie.) *Brit. Jour. of Ophthalmol.*, vol. 5, No. 7, p. 289-299.

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12. Myopia and Hypermetropia

Rule of Inheritance: Irregular (Recessive?)

(See also Sections 2, 11, 40)

1871. **Erismann, Friedrich.** Ein Beitrag zur Entwicklungsgeschichte der Myopie, gestützt auf die untersuchung der Augen von 4358 Schülern und Schülerinnen. Arch. f. Ophth., XVII, 1, S. 44-48.
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1883. **Tscherning, M.** Studien über die Aetiologie der Myopie. Arch. f. Ophth., XXIX, 1, S. 222-223.
1886. **Knies, M.** Ueber Myopie und ihre Behandlung. Arch. f. Ophth., XXXII, 3, S. 42.
1886. **Leininberg, N.** Klinisch-statistische Beiträge zur Myopie. Diss. Würzburg.
1886. **Schneller.** Ueber Entstehung und Entwicklung der Kurzsichtigkeit. Arch. f. Ophthal., XXXII, 3, S. 340-360.
1889. **Kirchner, M.** Untersuchungen über die Entstehung der Kurzsichtigkeit. Zeitschrift f. Hygiene, VII, 3, S. 397.
1889. **Motais.** De l'hérédité de la myopie. Arch. d'opht., IX, p. 321-341.
1889. **Schmidt-Rimpler, Hermann.** Zur Frage der Schulmyopie. Arch. f. Ophth., XXXI, 4, S. 115, u. XXXV, 4, S. 249.
1890. **Lehmann, Wilhelm.** Ueber die Hereditätsverhältnisse und den ophthalmoskopischen Befund bei der Myopie. Ein Beitrag zur Lehre von der Myopie. Diss. Kiel.
1891. **Javal, E.** Sur l'hérédité de la myopie. Franc. méd., No. 34, p. 536.
1891. **Proskauer, Theodor.** Ein Beitrag zur Myopiestatistik. Arch. f. Ophth., XXXVII, 2, S. 199-219.
1891. **Theobald, S.** Inherited monocular myopia. Johns Hopkins Hosp. Bull. Amer. Journ. of Ophthal., p. 250.
1892. **Berger, E.** Les maladies des yeux dans leurs rapports avec la pathologie générale, p. 442-444. Paris.
1892. **Cohn, H.** Lehrbuch der Hygiene des Auges. S. 269-278. Wien u. Leipzig.
1893. **Ohlemann, H.** Beitrag zur Schulmyopie. Arch. f. Augenheilk., XXVI, S. 168-180.
1896. **Wolff, H.** Ist die Inzucht ein Faktor in der Genese der deletären Myopie? Arch. f. Augenheilk., XXXIII, S. 63-71.
1897. **MacLehose, Norman M.** Notes of a myopic family. Ophth. Rev., p. 207.
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1903. **Hertel, E.** Ueber Myopie, klinische-statistische Mitteilungen. V. Graefe's Arch. f. Ophthal., Leipzig, LVI, 326-386.
1905. **Worth, Claud.** Hereditary Influence in Myopia. [In one family, nearly all the males were myopic and none of the females.] Medical Press, March 14. Trans. Oph. Soc. London, XXVI, 141-143.
1907. **Fleischer, Bruno.** Ueber Vererbung von Kurzsichtigkeit. Ber. u. d. 34 Versamm. d. Ophthal. Gesellschaft, p. 238. (Chart.)
1911. **Bogatsch, G.** Vererbung bei Myopie. Klin. Monatsbl. f. Augenheilk., XLIX, Bd. II, S. 431. (Chart.)

1911. **Tschierske, A.** Ueber die Vererbbarkeit der Myopie. Inaug. Diss. Rostock.
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1914. **Wilson, J. A.** Heredity in Myopia. Tabulated details of 1,500 consecutive cases of hereditary myopia. *British Medical Journal*, Aug. 29. *Lancet*, Aug. 15, p. 455.
1915. **Aronsfeld, G. H.** Heredity and Errors of Refraction. *Op. Jour. and Rev. of Optom.*, 35, p. 26.
1918. **Straub, M.** Heredity in Development of Myopia. (3 ill.) *Arch. d'Ophth.*, v. 36, p. 68.
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1921. **Stiel.** Über die Ursache der Kurzsichtigkeit. (Ver. rhein-westfäl. Augenärzte, Düsseldorf, Sitzg., v. 6, III, 1921.) *Klin. Monatsbl. f. Augenheilk.*, Bd. 66, Mai-H., S. 759.
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1922. **Wick, W.** Der heutige Stand der Forschung über Kurzsichtigkeit. (Akad. Augenklin., Düsseldorf.) *Ergebnisbericht*.
1923. **Clausen, W.** Das Wesen der Kurzsichtigkeit im Lichte neuerer Forschungen. *Naturwissenschaften*, Jg. 11, H. 23, S. 441-449.
1923. **Jablonsky, Walter.** Über die Vererbung der Refraktionszustände des menschlichen Auges. (Inst. f. Vererbungslehre u. Augenklin., Charité, Univ. Berlin.) *Schweiz. med. Wochenschr.*, Jg. 53, Nr. 36, S. 846-848.
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1923. **Uthoff.** Myopiefrage mit besonderer Berücksichtigung der Vererbungsfrage. (Verein. d. Augenärzte Schlesiens u. Posens, Breslau, Sitzg., v. 25, XI, 1923.) *Klin. Monatsbl. f. Augenheilk.*, Bd. 71, Nov.-Dez.-H., S. 763-764.
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1925. **Cholina, A.** (Variability of refraction and heredity in myopia. [In Russian.]) *Ibid.*, 1925 (7): Figures, ped. charts of 13 families. (After studying myopia from the biologic point of view and in the light of Mendel's theory the author concludes that myopia is probably hereditary (recessive) in the great majority of cases; it depends on at least two factors: refraction of the cornea and length of the antero-posterior axis of the ocular globe. From a review.)
1925. **Levinsohn, G.** Myopie, Senium und Vererbung. (Myopia, senium and inheritance.) *Kl. Monatsbl. f. Augenhlk.*, 74: 377-388. (Criticism of statements by Steiger and Vogt as to the cause of myopia and statement of the writer's own opinion, based on his investigations.)
- 1925/1926. **Holm, Eiler.** Investigations of myopia in Danish secondary schools. *Acta Ophthal.*, 3: 121-130. (Hereditary tendencies to myopia frequent in general population and no greater in professional class. Near work the immediate cause of school myopia, hereditary predisposition the underlying cause.)
Myopia from the point of view of heredity. *Ibid.*, 335-347. (7 fam. charts, writer's observations. 2 fam. charts from literature, inheritance due to varying number of dominant specific factors.)
1926. **Gassler, J. V.** Über eine bis jetzt nicht bekannte recessive Verknüpfung von hochgradiger Myopie mit angeborener Hemeralopie. (A hitherto unrecognized recessive coupling of high grade myopia with congenital hemeralopia.) *Arch. d. Julius Klaus-Stift.*, 1: 259-272, 1 pl., 1 ped chart, bibl. (Coupling not absolute; the hemeralopia not related to retinitis pigmentosa.)

13. Astigmatism

Rule of Inheritance: Dominant

1911. **Howe, Lucien.** Note on the heredity of corneal astigmatism and of muscular anomalies. *Trans. Amer. Ophthal. Soc.*, vol. XII, p. 1001.
1916. **Steiger, A.** Heredity Units in Human Eyes. (Refraction.) *Zeit. f. Augenh.*, v. 34, p. 1.

14. Glaucoma

Rule of Inheritance: Regularly Dominant

(See also Sections 2, 10, 25)

1869. **v. Graefe.** Beiträge z. Pathologie und Therapie des Glaucoms. *Arch. f. Ophth.*, Bd. XV, 3, S. 228.
1871. **Kummer.** Glaucomfamilie. *Corresp. Bl. f. Schweiz. Aerzte*, S. 280. Quoted by Siegheim and Lawford.
1875. **Pfäuger.** Beiderseitiges chronisches Glaukom bei zwei Brüdern von 19 und 20 Jahren. *Klin. Monatsbl. f. Augenheilk.*, XIII, S. 111-114.
1877. **Schmidt-Rimpler, Hermann.** Glaukom. *Handbuch d. ges. Augenheilk. von Graefe-Saemisch*, V, S. 66.
1880. **Schenkl.** Zur Erbllichkeit des Glaukoms. *Prager med. Wochenschr.*, V, S. 413. Abst. in Nagel's Jahresbericht.
1883. **Mules, H.** Hereditary transmission of glaucoma. *Ophth. Review*, Feb.
1883. **Wagner, W.** Einiges über Glaukom in Anschluss an einen Bericht über meine Erkrankung an Glaukom. *Arch. f. Ophth.*, XXIX, 2, S. 284.

1884. **Mooren, A.** Einige Bemerkungen über Glaukomentwicklung. Arch. f. Augenheilk., XIII, S. 362f.
1884. **Rampoldi, R.** Due notevoli osservazione di Glaucoma. Ann. di Ottalm., XIII, p. 347. Abst. in Nagel's Jahresbericht.
1885. **Harlan, H.** A case of hereditary glaucoma. Journ. A. M. A., p. 285.
1886. **Jacobson, J.** Beitrag zur Lehre vom Glaucom. Arch. f. Ophthal., 3, S. 96.
1887. **Howe, L.** A family history of blindness from glaucoma. Arch. of Ophthal., vol. XVI, p. 72.
1891. **Schweigger, C.** Glaukom und Sehnervenleiden. Arch. f. Augenheilk., XXIII, S. 237.
1893. **Somya, Ueber** erbliches Glaukom. Klin. Monatsbl. f. Augenheilk., S. 390-394.
1894. **Smith, Priestly.** On an instance of hereditary glaucoma and its cause. Trans. of the VII International Ophth. Congress, Edinburgh, p. 33. Ophthal. Rev. (July), XIII, 215-226. Abst. in Nagel's Jahresbericht.
1896. **Lange, O.** Ueber Glaukom in seinen Beziehungen zu den Allgemeinerkrankungen. Sammlung zwangl. Abhandl. a. d. Gebiete der Augenheilkunde herausg. von Vossius, I, 6, S. 36.
1898. **Harlan, Herbert.** A case of hereditary glaucoma. Trans. Amer. Med. Assoc. Die Ophth. Klinik, III, S. 64.
1899. **Rogmann.** Zur Pathogenese des einfachen chronischen Glaukoms. Eine Familie mit erblichen Glaukom. Die Ophth. Klinik, III, S. 136-139.
1907. **Lawford, J. B.** Examples of hereditary primary glaucoma. Royal London Ophth. Hospital Reports, XVII, March, p. 57.
1912. **Smith, Priestly,** "states that primary glaucoma sometimes occurs in several members of a family. . . ." Ophthalmic Review, vol. XXXI, p. 289.
1913. **Lawford, J. B.** Note on hereditary primary glaucoma. Royal London Ophth. Hosp. Rep., XIX, Part I, p. 42.
1914. **Calhoun, F. P.** Hereditary glaucoma (simplex) in three generations. Trans. Amer. Med. Assn. (Chart.)
1914. **Reber, W.** Glaucoma. New York Med. Jour., v. 99, p. 357.
1918. **Plocher, R.** Juvenile familial glaucoma. (Bibl.) Klin. M. f. Augenh., v. 60, p. 592.
1923. **Salus, Robert.** Glaukom und Feuermal. (Augenabt., Poliklin. Inst. Dtsch., Univ. Prag.) Klin. Monatsbl. f. Augenheilk., Bd. 71, Sept.-Oktober-H., S. 305-310.
1923. **Snell, Albert C.** Hereditary Glaucoma simplex (juvenile glaucoma). (Erbliches Glaucoma simplex [jugendliches Glaukom].) New York State Jour. of Med., vol. 23, No. 4, p. 151-154.

15. Conjunctiva

1914. **Armaignac, H.** Hereditary Pterygium. Soc. Fr. d'Opht., v. 31. Ann. d'Ocul., v. 151, p. 469. Clin. Opht., v. 20, p. 429.
1916. **Lamb, H. D., and Hardy, W. F.** Lipodermoid of Bulbar Conjunctiva with Congenital Defects. Amer. Jour. Ophth., v. 33, p. 32.

1926. **Bruck, A.** Ueber das familiäre und hereditäre Vorkommen des Trachoms. (On the familial and hereditary occurrence of trachoma.) *Russ. Ophthal. J.*, 5 (6): 585. (Extensive investigations in 13 families with trachoma. Tuberculosis and disturbance of internal secretions also frequent. The severe cases of trachoma appear to be hereditary in the sense that the constitution in such families favors infection and severe course of the disease. Disease milder in later generations due to weakening of the virus. From a review.)
1927. **Macklin, Madge T.** Hereditary abnormalities of the eye. IV. Heritable diseases affecting the conjunctiva. *Canadian Med. Assn. J.*, 17 (6): 697-702, 5 ped. charts, bibl. (Illustrative pedigree charts from the literature. Consideration of blue sclerotics, pterygium, megalocornea, microcornea, keratoconus, embryotoxon, corneal opacities. Of these keratoconus and corneal opacities are the most serious, and affected individuals should not reproduce.)

16. Sclera and Cornea (General)

1925. **Felix, C. H.** Kongenitale familiäre Cornea plana. (Familial, congenital cornea plana.) *Kl. Monatsbl. f. Augenheilk.*, 74: 710-716. (Two boys affected. The mother and father were uncle and niece.)
1927. **Heinonen, O.** Nachtrag zu meiner Arbeit "Über Episcleritis periodica fugax und Erbllichkeit." (Supplement to my paper on episcleritis periodica fugax and heredity.) *Acta Ophthal.*, 4 (3): 278-280. Ped. chart. (5 members of 3 generations affected. Dominant inheritance of the trouble, which is probably due to metabolic disturbance.)

17. Corneal Degeneration

Rule of Inheritance: Usually Dominant

(See also Sections 15, 41)

1840. **Crampton.** On congenital opacity of the cornea. *London Medical Gazette*, S. 432.
1875. **Krückow.** Zwei Fälle von angeborenem Hornhautstaphylom. *Arch. f. Ophth.*, XXI, 2, S. 213-235.
1892. **Oliver, C. A.** Two cases of symmetrically placed opacities of the cornea occurring in mother and son. *Amer. Journ. of Ophthal.*, p. 234.
1897. **Steinheim.** Zur Kenntnis der angeborenen Staphylome der Hornhaut. *Centralbl. f. Augenheilk.*, S. 353-358.
1903. **Freund.** Ueber gittrige Hornhauterkrankung. *Arch. f. Ophthalmologie*, Bd. LVII, S. 377.
1904. **Fehr, Oskar.** Ein Fall von gittriger Hornhauttrübung. *Centralbl. f. prakt. Augenheilk.*, June.
1904. **Spicer, H.** Hereditary nodular opacities of the cornea. *Ophthal. Review*, p. 59. Abst. in *Nagel's Jahresbericht*.
1904. **Veasey, Clarence A.** Report of two cases of family macular degeneration of the cornea. *Arch. of Ophthal.*, XXXIII, p. 510.
1905. **Dawnay, A. H. Payan.** Corneal opacities in members of the same family. *Trans. of the Ophth. Society of the United Kingd.*, vol. XXV, p. 62.
1905. **Doyme, R. W., and Stephenson, S.** Upon five cases of family degeneration of the cornea. *The Ophthalmoscope*, vol. III, No. 5, p. 213.

1905. **Fleischer, B.** Ueber familiäre Hornhautentartung. Ber. über d. 32 Versamm. d. ophth., Gesell. Heidelberg, S. 345.
1905. **Spitta, W.** Ueber familiäre, fleckförmige Hornhautentartung. Inaug. Diss. Tübingen.
1906. **Rochat, G. F.** Family corneal degeneration. Ned. Tydsch. v. Geneesk., I, p. 8. Abst. in Arch. of Ophth., 1907, vol. XXXVI, p. 585.
1907. **McNab, A.** Congenital opacity of the cornea in three members of one family. Trans. Ophth. Society Unit. Kingd., July 12. Abst. in Amer. Journ. of Ophthal., Sept., 1907, XXIV, p. 273.
1908. **Folker, Herbert H.** Nodular opacity of the cornea in three generations. Ophth. Society of the United Kingd., XXIX, 1909, p. 42. Ophth. Review, p. 385. (Chart.)
1909. **Komoto, J.** Ueber angeborene erbliche Hornhauttrübung. Klin. Monatsbl. f. Augenheilk., Oct., p. 445.
1911. **Buchanan, Leslie.** Note on family degeneration of the cornea. Ophthalmoscope, p. 693. (No chart.)
1912. **Meyerhof, M.** Cas de dégénérescence tachetée familiale de la cornée. (Bull. de la Soc. d'Ophth. d'Egypte, p. 9, 1911.) Revue générale d'Ophth., p. 501.
1912. **Roy, Dunbar.** Report of six cases of degeneration of the cornea in the same family (nodular keratitis). Trans. of the Amer. Ophth. Society, vol. XIII, P. I., p. 101. (Has chart.)
1913. **Chance, Burton.** Degeneration of the cornea of father and son. Trans. Amer. Ophthal. Soc., vol. XIII, p. 282. (No chart.)
1913. **Weeks, J. E.** Nodular degeneration of the cornea in father and son. Arch. of Ophthal., vol. XLII, p. 179, March. (No chart.)
1914. **Moxon, F.** Congenital Diffuse Opacity of Cornea in Sisters. Proc. Roy. Soc. Med., Feb. 4. Ophth. Rev., v. 33, p. 93.
1916. **Uhthoff, W.** Degenerative Changes of Cornea. Klin. M. f. Augenh., Sept.-Oct., 1915, p. 325. Arch. of Ophth., v. 45, p. 517.
1916. **Zani, D.** Family Degeneration of Cornea. Ann. di Ott., v. 43, p. 545.
1921. **Tritscheller, L.** Beitrag zur Vererbung der familiären Hornhautentartung. (Univ.-Augenklin., Tübingen.) Klin. Monatsbl. f. Augenheilk., Bd. 66, Mai-H., S. 579-581.
1921. **Tritscheller, L.** Beitrag zur Vererbung der familiären Hornhauterkrankung. (Vereinig. d. Augenärzte, Tübingen, Sitzg., v. 22, V, 1921.) Med. Korrespondenzblatt. f. Württemberg, Bd. 91, Nr. 38, S. 151; Klin. Monatsbl. f. Augenheilk., Bd. 66, Juni-H., S. 923.
1922. **Landenberger, F.** Eine bisher noch nicht beobachtete Erscheinung bei der "Familiären Hornhautentartung." (Aufhellung durch interkurrente Entzündung.) (Univ.-Augenklin. Würzburg.) Arch. f. Augenheilk., Bd. 92, H. 1/2, S. 14-20.
1922. **Stähli, J.** Die Frage der Vererbbarkeit des Keratoconus. (Ges. der schweiz. Augenärzte, Schaffhausen, Sitzg., v. 24 u. 25, VI, 1922.) Klin. Monatsbl. f. Augenheilk., Bd. 69, Juli-H., S. 124.
1923. **Hine, Montague L.** Familial nodular and reticular keratitis. (Familiäre Knötchen- und netzförmige Keratitis.) Proc. Roy. Soc. Med., vol. 16, No. 11, Sect. of Ophth., p. 43-45.
1923. **Kraupa, E.** Die familiären degenerativen Hornhautveränderungen (neurotische Dystrophie und Ichthyosis cornea) im System der sog. Dystrophien der Hornhaut. (Augenärztl. Vereinig., Leipzig, Sitzg., v. 18, II, 1923.) Klin. Monatsbl. f. Augenheilk., Bd. 70, März-H., S. 396-397.

1923. **Wolz, Otto.** Zur Frage der Vererbbarkeit des Keratokonus. (Univ. Augenklin., Zürich.) Arch. f. Augenheilk., Bd. 92, H. 3/2, S. 156-173.
1925. **Stanka, R.** Über familiäre gittrige Hornhautdegeneration. (On familial lattice-work degeneration of the cornea.) Kl. Monatsbl. f. Augenhk., 74: 357-360. (Father and two sons affected, 2 sons and 2 daughters normal. All the males glass blowers. Description of case of one son.)
- 1925/1926. **Siemens, H. W.** Ueber einen, in der menschlichen Pathologie noch nicht beobachteten Vererbungsmodus; dominant-geschlechtsgebundene Vererbung. (On a method of inheritance not previously observed in human pathology; dominant sex-linked heredity.) Arch. f. Rassen- u. Gesell.-Biol., 17 (1): 47-61. 4 ped. charts, 1 tab., 3 figs. (Incomplete dominance of corneal degeneration with keratosis.)
1926. **Hambresin.** Dégénérescence tachetée héréditaire et familiale de la cornée; examen à la lampe à fente. (Hereditary and familial spotted degeneration of the cornea; examination by slit-lamp.) Rev. gén. d'ophtal., 40 (6): 251-252. (Mother and 4 children affected. Similar to case described by Fehr in 1904.)
1926. **Jeandelize, P., et Bretagne, P.** Un cas de kératite héréditaire et familiale vu en microscopie oculaire. (A case of hereditary and familial keratitis examined with the ocular microscope.) Ann. d'oculist, 163: 608-613. (Keratitis of lattice-work type in a man, his sister, and her son, and probable cases in several other members of the family.)
1926. **Sallmann.** Fälle von familiärer Hornhauterkrankung mit Drucksteigerung und Nystagmus. (Cases of familial disease of the cornea with increase in pressure and nystagmus.) Kl. Monatsbl. f. Augenheilk., 77: 725. (Three of four children affected. Parents first cousins. Six children from father's first marriage normal.)

18. Buphthalmus

Rule of Inheritance: Probably Dominant

(See also Section 15)

1896. **Warlomont, Renè.** Deux cas de buphtalmie bilatérale avec conservation d'une bonne vision, observée chez deux frères. Ann. de la Soc. sc. de Bruxelles, XXX, 2.
1898. **Johnson, W. B.** Buphthalmus, series of cases in the same family. Trans. of the Thirty-fourth Ann. Meeting of the Amer. Ophth. Society, p. 308.
1902. **Vennemann.** Remarques au sujet de case de buphtalmos. Société belg. d'Opt., Apr. 26. Abst. in Nagel's Jahresbericht.
1904. **Zahn, Erwin [Gustav-Alfred].** Ueber die hereditären Verhältnisse bei Buphthalmus. Inaug. Diss. Tübingen, F. Pietzker, 22 pp., 8°. Abst. in Nagel's Jahresbericht.
1914. **Kaminsky, D.** Congenital Hydrophthalmus. Klin. Monatsbl. f. Augenheilk., Jan., p. 161.
1914. **Kayser, B.** Ueber Vererbung von Hydrophthalmus resp. Megalokornea. Stammbaum mit rezessiver Vererbung in 6 Generationen. Klin. Monatsbl. für Augenheilk., LII, Bd. I, S. 226. (Large chart.)
1914. **Oguchi, C.** Hereditary Megalocornea. Nippon Gank. Zashi, Dec.
1916. **Gronholm, U.** Familial Abnormally Large Cornea, Relation to Hydrophthalmos. Finska Läkär. Handl., v. 58, p. 1792.

1917. **Marklund, G.** Heredity of Megalocornea. Finska läk sällsk. handl. Helsingfors, v. 59, p. 1606.
1921. **Grönholm, V.** Über die Vererbung der Megalocornea nebst einem Beitrag zur Frage des genetischen Zusammenhanges zwischen Megalocornea und Hydrophthalmus. (Univ.-Augenklin., Helsingfors.) Klin. Monatsbl. f. Augenheilk., Bd. 67, Juli-H., S. 1-15.
1926. **Gredig, C.** Eine neue Vererbungsart der Megalocornea. (A new method of inheritance of megalocornia.) Arch. d. Julius Klaus-Stift., 2: 79-89. 1 ped. chart, 1 photo. (While earlier pedigrees indicate recessive sex-linked inheritance, the new pedigree shows typical dominance.)

19. Blue Sclerotics

Rule of Inheritance: Dominant

(See also Section 15)

1910. **Harman, Bishop.** A pedigree of five generations of blue sclerotics. Ophthalmoscope, p. 559. (Chart.)
1911. **Burrows, H.** British Med. Journ., July 1, p. 16. A family in which thirteen out of twenty-nine individuals, in four generations, showed Blue Sclerotics.
1912. **Adair-Dighton.** Four generations of blue sclerotics. Ophthalmoscope, vol. X, p. 188. (Chart.)
1913. **Conlon, F. A.** Five Generations of Blue Sclerotics and Associated Osteoporosis. W. M. Leonard, Boston.
1914. **Antonelli, A.** Oval Cornea and Blue Sclerotic of Hereditary Syphilis. Soc. Fr. d'Ophth., v. 30, p. 490.
1914. **Cockayne, E. A.** Hereditary blue sclerotics and brittle bones. Ophthalmoscope, May, p. 271. (Chart.)
1915. **Conard, H. S., and Davenport, C. B.** Hereditary Fragility of Bone (Fragilitas Osseus, Osteopsathyrosis). Eugenics Record Office Bulletin No. 14, November. 31 pp.
1915. **Herrman, Charles,** with comment by **Fridenberg, Percy H.** Blue Sclerotics Associated with Brittle Bones. Amer. Journ. of Diseases of Children, March, vol. IX, pp. 205-212.
1921. **Avizonis, P.** Über blaue Sclera. (Augenabteilung des Militärkrankenhauses, Kaunas.) Medicina, Jg. 2, H. 5, S. 151-153. (Litauisch.)
1921. **Blegvad, Olaf, und Haxthausen, Holger.** Blaue Sclerae und Tendenz zu Knochenbruch mit fleckförmiger Hautatropie und zonulärer Katarakt. (Dermatol. Univ. Klin., Rigshosp., Kopenhagen.) Hospitalstidende, Jg. 64, Nr. 39, S. 609-616. (Dänisch.)
1921. **Freytag, Gustav Th.** Über blaue Sclera und Knochenbrüchigkeit. (Univ.-Augenklin., Leipzig.) Klin. Monatsbl. f. Augenheilk., Bd. 66, März-April-H., S. 507-512.
1922. **Gutzeit, Richard.** Über blaue Sklera und Knochenbrüchigkeit. (Johanniter-Kreiskrankenhaus, Neidenburg.) Klin. Monatsbl. f. Augenheilk., Bd. 68, H. 6, S. 771-774.
1922. **Imai, Ryochei.** Blaue Sclera und Knochenbrüchigkeit. Jahresvers. d. japan. ophthal. Ges., Kyoto, 2-3, IV, 1922.
1922. **Scheel.** Mutter und Tochter mit blauen Skleren und Neigung zum Knochenbruch. (Med. Ges. Odense, Sitzg., v. 27, XI, 1921.) Hospitalstidende, Jg. 65, Nr. 37, S. 1-3. (Dänisch.)

1922. **Stewart, Hall.** Fragilitas ossium associated with blue sclerotics. (Brüchige Knochen mit blauen Scleren.) Brit. Med. Journ., No. 3220, p. 498.
1923. **Aubineau, E.** Le syndrome des sclérotiques bleues. (Das Syndrom der blauen scleren.) Ann. d'Oculist, Bd. 160, H. 5, S. 337-342.
1923. **Bigler, Max.** Über das gleichzeitige Vorkommen von Osteop-sathyrose und blauer Verfärbung der Scleren bei Otosklerose. (Oto-laryngol. Inst., Univ. Zürich.) Zeitschr. f. Hals-, Nasen- und Ohrenheilk., Bd. 5, H. 3/4, S. 233-239.
1923. **Blatt, Nikolaus.** Ein Fall von blauer Sclera, Knochenbrüchigkeit und primärem epibulbärem Carcinom von basocellulärem Charakter. v. Graefe's Arch. f. Ophth., Bd. 111, H. 1/2, S. 54-59.
1923. **Buchanan, Leslie.** Blue sclerotics. (Blaue Sclerae.) Transact. of the Ophth. Soc. of the United Kingdom, vol. 43, p. 352-354.
1923. **Singer, Siegmund.** Ein Beitrag zur Frage der Kombination abnormer Knochenbrüchigkeit und blauer Scleren. (II. Med. Univ. Klin., Wien.) Zeitschr. f. klin. Med., Bd. 97, H. 1/3, S. 43-57.
1923. **Straat, H. L.** Blaue Sclerae, Fragilitas ossium und Otosklerose. Nederlandsch Tijdschr. v. Geneesk., Jg. 67, 1. Hälfte, Nr. 2, S. 151-153. (Holländisch.)

20. Parenchymatous Keratitis

Rule of Inheritance: Irregular

1914. **Boas, H., and Rönne, H.** Family Syphilis and Parenchymatous Keratitis. Klin. M. f. Augenh., Feb., p. 219.
1914. **Stargardt, K.** Etiology of parenchymatous keratitis. 39th Ophth. Cong., Heidelberg, p. 316.
1914. **Igersheimer, J.** Destiny of Patients with Parenchymatous Keratitis of Hereditary Syphilis. 39th Ophthal. Congress, Heidelberg, p. 251.
1914. **Lesser, F., and Carsten, P.** Familial Syphilis and Parenchymatous Keratitis. Deutsche Med. Woch., v. 40, p. 755.
1915. **Barbagalia, V.** Hereditary Syphilitic Parenchymatous Keratitis in Adult. Gazz. Internaz. di Med., v. 18, p. 273.
1915. **Lesser, F.** Parenchymatous Keratitis and Hereditary Syphilis. Woch. f. Therap. u. Hyg. d. Auges, 18, p. 99.
1916. **McDannald, C. E.** Interstitial Keratitis with Hereditary Lues. Arch. of Ophthal., v. 45, p. 378.
1918. **Sachs, O.** Congenital Syphilis and Parenchymatous Keratitis. Wien klin. Woch., 1917, p. 1153. Abst. Klin. M. f. Augenh., v. 60, p. 287.

21. Persistent Pupillary Membrane

Rule of Inheritance: Irregular

1843. **Schwarz.** Pupilla praeternaturalis congenita. Schmidt's Jahresbericht, XXXVII, S. 327-329. (No chart.)
1888. **Wicherkiewicz, B.** Beitrag zur Kenntniss der persistierenden Pupillarmembran. Arch. f. Ophth., XXXIV, 4, S. 35.
1909. **Peters, Albert.** Ueber angeborene vordere Synechien und verwandte Missbildungen des Auges. S.-A. a. d. Sitzungsber. und Abhandl. der naturf. Gesellsch. zu Rostock. Neue Folge, Bd. I.

1916. **Onishi.** Persistent Pupillary Membrane. Nippon Gank. Zasshi, July, 1916.
1916. **Wolfrum.** Persistent Pupillary Membrane and Coloboma. v. Graefe's Arch. f. Opth., v. 90, p. 471-486. Ophthalmology, v. 13, p. 120. (No chart.)

22. Iris (General)

1921. **Holth, S., and Berner, O.** Miosis congenita seu Microcoria familiaris, ex aplasia muscoli dilatatoris pupillae. (Med. Ges., Christiania, Sitzg., v. 23, II, 1921.) Norsk. Magaz. f. laegevidenskaben, Jg. 82, Nr. 9, S. 63-69. (Norwegisch.)
1923. **Holth, S., and Berner, O.** Miosis congenita seu microcoria familiaris, ex aplasia muscoli dilatatoris pupillae. (Angeborene Miosis oder familiäre Mikrokorie, infolge von Aplasie des M. dilatator pupillae.) Sonderdruck aus: Videnskapsselskapets skrifter. I. Mat. naturv. Klasse, Nr. 4, 28, S. 1922.
1923. **Velhagen.** Atypisches Coloboma iridis congenitum beim Vater, Aniridia congenita bei den Kindern. Münch. med. Wochenschr., Jg. 70, Nr. 15, S. 469-470.
1926. **Pelláthy, A.** Hypoplasia familiaris des vorderen Irisblattes, mit konsekutiver Mydriasis. (Familial hypoplasia of the anterior layer of the iris, with resultant mydriasis.) Klin. Monatsbl. f. Augenhk., 77: 368-370. (4 persons, 3 generations.)

23. Iris, Color of

Rule of Inheritance: Brown Semi-dominant over Blue

1907. **Davenport, G. C. and C. B.** Heredity of Eye Color in Man. Science, N. S., pp. 589-592, Nov.
1908. **Gossage, A. M.** Family of heterochromia of the left iris. Quarterly Journal of Medicine, Apr., p. 341.
1908. **Hurst, C. C.** On the Inheritance of Eye Color in Man. Proc. Royal Soc. B., vol. 80, pp. 85-96.
1909. **Holmes, S. J., and Loomis, H. M.** The Heredity of Eye Color and Hair Color in Man. Biol. Bull., XVIII, 50-65, Dec.
1911. **Cox, W. H.** De Pigmentatie der iris van den Mensch en haar erflykheit. (Die Pigmentation der menschlichen Iris und ihre Erbllichkeit.) Nederl. Tijdschr. v. Geneesk., I, S. 1500.
1914. **Bonnevie, K.** Color of Eyes as Bearing on Legitimacy. Centralbl. f. Augenh., v. 38, p. 79.
1915. **Stören.** Hereditary Transmission of Color of Eyes. Tidschrift f. d. Norsk. Laeger., p. 553. Ophthalmology, v. 13, p. 493.
1917. **Ewart, R. J.** Influence of Age of Parent at Birth of Child on Eyecolor, etc. Jour. Hyg., v. 16, p. 12.
1920. **Boas, H. M.** Inheritance of Eye Color in Man. Amer. Jour. Physiol. Anthropol., 1919, pp. 15-20.
1920. **Fisher, R. A.** Heredity in Color of Iris. Lancet, March 27, 1920, p. 736.
1921. **Klopstock, Alfred.** Familiäres Vorkommen von Cyclopie und Arhinencephalie. (Auguste Victoria-Krankenhaus, Berlin-Schöneberg.) Monatsschr. f. Geburtsh. u. Gynäkol., Bd. 56, H. 1/2, S. 59-71.
1921. **Winge, Ö.** Über eine teilweise geschlechtsverknüpfte Vererbung der Augenfarbe beim Menschen. (Carlsberg laborat., København.) Meddel. fra Carlsberg laborat., Bd. 14, Nr. 12, S. 1-22. (Dänisch.)

1922. Winge, Ö. Über eine teilweise geschlechtsgebundene Vererbung der Augenfarbe bei Menschen. Zeitschr. f. indukt. Abstammungs- und Vererbungs., Bd. 28, H. 1, S. 53-74.
1925. Frets, G. P. Over de erfelijkheid van de oogkleur. (On heredity of eye-color.) Genetica, 7: 65-86, 1 ped. cht. (Insufficient evidence that genotypically blue-eyed parents can have non-blue-eyed children.)
1926. Japha, A. Über die Vererbung der Augenfarben beim Menschen. (On the inheritance of eye color in man.) Verhandl. Ges. Phys. Anthropol., 1: 58-61. (100 pedigrees investigated. In all cases simple dominance of darker eye color over lighter. Some exceptional cases, such as dark-eyed child from light-eyed parents, discussed. Examination of 7,000 school children in Halle showed 34.3% of dark-eyed boys and 35.4% of dark-eyed girls.)
1926. Macklin, Madge Thurlow. Hereditary abnormalities of the eye. I. Introduction: The laws of heredity and their exemplification in the inheritance of eye colour. Canadian Med. Ass. J., 16: 1340-1342. Brief statement of the laws. 1 table showing possible matings between individuals with two different eye colors.)
1927. Bollag, L. Untersuchungen über die Vererbung von Mischfarben der Iris beim Menschen. (Studies on inheritance of mixed colors in the human iris.) Arch. der Julius Klaus-Stift., 2 (2): 191-205. 42 ped. charts, 1 col. pl. (Mixed eye colors have not arisen by hybridization—they do not segregate in clean-cut fashion. Also mixed color not due to a special gene. Iris color due to multiple genes.)
1927. Davenport, C. B. Heredity of human eye color. Bibl. Genetica, 3: 443-463. 1 tab., bibl. (Review of literature.)

24. Albinism in Eye Color

Rule of Inheritance: Recessive

(See also Sections 38, 48)

1871. Hutchinson, Jonathan. Albinism in a brother and sister, defective vision and oscillation of globes in both. Hypermetropia. Ophthalm. Hosp. Rep., VII, p. 37.
1871. Arcoleo, G. Studi sull' Albinismo. Gazz. clin. dello spedale civico di Palermo, F. 11, p. 15. Abst. in Nagel's Jahresbericht, p. 167.
1877. Koren. Ein Fall von Albinos nach "Versehen." Norsk. Magaz. f. Lægervid., R. 3, VI, Forh., S. 46. Quoted by Groenouw.
1878. Manz, W. Ueber albinotische Menschengen. Arch. f. Ophth., XXIV, 4, S. 139-170.
1881. v. Förster. Ueber Albinismus. Klin. Monatsbl. f. Augenheilk., S. 389.
1882. Mayerhausen, G. Casuistischer Beitrag zur Kenntniss des Albinismus. Klin. Monatsbl. f. Augenheilk., S. 191.
1891. Syms, G. W. Albinism; a curious family history. Ophth. Rev., p. 255.
1906. Legleyze, P. Archiv d'Ophthal., May-June-July. ("Found 27 cases albinism, mostly among people in an isolated province. . .")
1907. Levy, A. Partial albinism with a curious heredity. Trans. of the Ophth. Society of the United Kingd., vol. XXVII, p. 220, and Ophth. Review, p. 25. (Chart.)
1908. Davenport, C. B. Degeneration, Albinism and Inbreeding. Sc., N. S., 28, p. 454.

1910. **Davenport, G. C. and C. B.** Heredity of Skin-Pigment in Man. Amer. Nat., XLIV, 642-672, 705, 731.
1911. **Pearson, K., Nettleship, E., and Usher, C. H.** Albinism in Man. Part I. (Continued in Parts II-IV.) Biometric Laboratory Pub. Draper's Co. Research Mem.
1911. **Tertsch, R.** Albino mit bemerkenswertem Stammbaum. (Ophth. Gesellsch. in Wien.) Zeitschr. f. Augenheilk., XXV, S. 107.
1916. **Knowles, F. C.** Family Albinism. Interstate Med. Jour., v. 23, p. 555.
1916. **Verwey, A.** Albinism and Heredity. Nederl. Tijdschr. v. Geneesk., p. 1530.
1922. **Weber, Käthe.** Über Vererbung von Albinismus. (Univ. Augenklin., Innsbruck.) Arch. f. Augenheilk., Bd. 92, H. 1/2, S. 40-43.

25. Iris, Coloboma of

Rule of Inheritance: Usually Dominant

(See also Sections 2, 22, 26)

1858. **Streatfield, J. F.** Coloboma iridis. Hereditary and rare cases. Royal London Ophth. Hospital Reports, I, p. 153.
1871. **Hoffman, Hugo v.** Ueber ein Colobom der inneren Augenhäute ohne Colobom der Iris. Inaug. Diss. Bonn. Quoted by DeBeck.
1880. **Marty, Hector.** Contribution a l'étude du colobome de la choroïde et de l'iris. Thèse de Paris. Quoted by DeBeck.
1884. **Mittendorf, W. F.** Multiple colobomata of the iris, etc. Trans. 19th Ann. Meeting Amer. Ophth. Society, p. 735.
1886. **DeBeck, D.** A rare family history of congenital coloboma of the iris. Arch. of Ophthal., XV, p. 8. (Chart.)
1893. **Bock, Emil.** Die angeborenen Kolobome des Augapfels.
1894. **DeBeck, D.** Family history of irideremia and coloboma iridis. Trans. of the Amer. Ophthal. Soc., Thirtieth Meeting, p. 117.
1894. **Pfanmüller, F.** Beitrag zu den Colobomen des Auges. Inaug. Diss. Giessen.
1897. **Maynard.** Two cases of coloboma iridis in mother and son, etc. Ind. Med. Gazette, No. 12. Abst. in Nagel's Jahresbericht, 1898.
1900. **Selz, E.** Eine Colobom-Familie. Inaug. Diss. Jena.
1908. **Snell, Simeon.** Coloboma of the iris in each eye, occurring in five generations. Ophth. Review, p. 95, and Trans. of the Ophth. Society of the United Kingd., XXVIII, p. 148. (Chart.)
1912. **Hird, R. B.** Ophthalmic Review, vol. XXXI, p. 162. An exhaustive treatise on the various colobomata.
1912. **Plange, O.** Zur Kasuistik der angeborenen Iris Anomalien. Klin. Monatsbl. f. Augenheilk., Oct., p. 490. (No chart.)
1914. **Hessin.** Family Coloboma of Iris and Choroid. Klin. M. f. Augenh., v. 52, p. 728. (No chart.)
1914. **Kagoshima.** Coloboma of Iris. Nippon Gank. Zasshi, Sept.
1914. **Ourgaud and Bernard.** Bilateral Familial Iridio-Choroidal Coloboma. Marseille Med., v. 51, p. 461. (No chart, 4 gens. affected.)
1914. **Van Duyse.** Iris Coloboma with Membrane of Hess. Soc. Belge d'Opht., No. 38; also abst. Klin. M. f. Augenh., v. 53, p. 248. (No chart.)
1915. **Attlee, J.** Coloboma of Iris in Mother and Child. Roy. Soc. Med., Sec. on Ophth., June 9, Arch. of Ophth., v. 44, p. 670.

1915. **Lewis, A. C.** Complete Bilateral Irideremia in Child; Father with Bilateral Coloboma of Iris. *Ophth. Rec.*, 24, p. 134.
1915. **Van der Breggen, F. A.** Family Anomalies of Iris. *Nederl. Tijdschr. v. Geneesk.*, 1915, p. 1874. *Arch. d'Ophth.*, v. 34, p. 780.
1916. **Khessin, M. S.** Four Cases of Coloboma of Iris and Choroid in One Family. *Viestnik. Ophth.*, v. 32, p. 481.
1916. **Ring, G. O.** Congenital Cataract and Coloboma of Iris in Mother and Child. *Trans. Coll. Phys., Philadelphia*, v. 37, p. 468.
1917. **Loeb, C.** Hereditary Coloboma of Iris. *Ann. of Ophth.*, v. 26, p. 573.
1917. **Ring, G. O.** Coloboma of Iris with Congenital Cataract. *Ophth. Rec.*, v. 26, p. 113.
1918. **Loeb, C.** Hereditary Upward Coloboma of Iris. Other Hereditary Conditions. *Chicago Ophth. Soc.*, Oct. 15, 1917. *Amer. Jour. Ophth.*, v. 1, p. 62.
1925. **Frank-Kamenetski, S. G.** Eine eigenartige hereditäre Glaukomform mit Mangel des Irisstromas und geschlechtsgebundener Vererbung. (A peculiar form of hereditary glaucoma with absence of the stroma of the iris and sex-linked inheritance.) *Klin. Monatsbl. f. Augenhk.*, 74: 133-150. (A hitherto undescribed juvenile form of glaucoma simplex with congenital lack of anterior layer of iris leading to blindness. Pedigree chart, 5 gens., 50 individuals, 11 males affected. The condition occurs only in Russian males of a part of the Province of Irkutsk. A congenital lack of the connective tissue of the stroma of the iris is the primary disease and the glaucoma is secondary. Recessive, sex-linked inheritance.)

26. Aniridia and Irideremia

Rule of Inheritance: Usually Dominant

(See also Sections 2, 11, 22, 25, 38)

1834. **Gutbier.** De Irideremia seu defectu iridis congenito. v. Ammon's *Zeitschrift f. Ophth.*, V, S. 78. Quoted by Manz in *Graefe-Saemisch Handbuch d. gesamt. Augenheilk.*, Cap. VI, S. 90, 1876.
1866. **Schroeter, Paul J.** Ein Fall von vererbter Irideremie. *Klin. Monatsbl. f. Augenheilk.*, IV, S. 100-103.
1874. **Page, Herbert.** Transmission through three generations of Microphthalmus, Irideremia and Nystagmus. *Lancet*, S. 193.
1877. **Laskiewicz-Friedensfeld, A. J.** Angeborener Irismangel. *Klin. Monatsbl. f. Augenheilk.*, S. 319 and 357.
1878. **Benson, A. H.** Congenital irideremia of both eyes. *British Medical Journal*, II, p. 358.
1878. **Breitbarth, E.** Beitrag zur Kenntniss der Ectopia pupillae. *Inaug. Diss. Giessen*.
1880. **Galezowski, Jean.** Iridémie ou absence de l'iris transmise par hérédité dans plusieurs generations. *Recueil d'Ophth.*, p. 122. Quoted by Groenouw.
1886. **De Benedetti.** Irideremia totale congenita, etc. *Annali di Ottal.*, XV, p. 184. Abst. in *Nagel's Jahresbericht*.
1887. **Nicolini, T.** Irideremia congenita totale bilaterale con cataratta capsulolenticulare. *Boll. d'Oculist.*, IX, 10, 11. Abst. in *Nagel's Jahresbericht*.
1888. **Theobald, S.** A case of double congenital irideremia in a child whose mother exhibited a congenital coloboma of each iris. *Amer. Journ. of Ophthal.*, p. 206.

1889. **Strzemiński.** Zwei Fälle von beiderseits angeborenen Fehlern der Iris. *Gaz. lek.*, IX, 52.
1895. **Mohr, W.** Ueber hereditäre Irideremie. Inaug. Diss. Jena. Abst. in Nagel's Jahresbericht.
1898. **Andrews, Jos. A.** Congenital absence of the iris. *Ophthal. Record*, Nov.
1899. **Carra, U.** Hereditäre kongenitale Aniridie. *Policlinico*. Dez.
1900. **Hopf.** Zur pathologische Anatomie das angeborenen Irismangels. Inaug. Diss. Jena. Abst. in Nagel's Jahresbericht.
1902. **Randall.** Congenital aniridia in mother and daughter. *Ophthal. Record*, p. 664.
1902. **Juler, H.** Aniridia. *Ophth. Review*, p. 22.
1903. **Thye.** Doppelseitiger kongenitaler Defect des vorderen Irisblattes in zwei Generationen. *Klin. Monatsbl. f. Augenheilk.* Beilageheft, S. 374. Abst. in Nagel's Jahresbericht.
1903. **Polte.** Mehre Fälle angeborener Iris-Missbildung. *Arch. f. Augenheilk.*, XLVIII, S. 75. Abst. in Nagel's Jahresbericht.
1903. **Moissonnier und Pouchet.** Aniridie familiale. *Arch. d'Ophthal.*, XXIII, p. 648.
1903. **Hamilton, T. K.** Family Irideremia. *Ophthalmoscope*, May.
1903. **Blair and Potter.** Two cases of aniridia and one of coloboma of the iris in the same family. *Ophthal. Review*, p. 51.
1904. **Knape, Ernst N.** Aniridia bilateralis bei Vater und Sohn. *Wochenschr. f. Ther. u. Hyg. des Auges*, May 26, VII, 273. Abst. in Nagel's Jahresbericht. (No chart.)
1904. **Bergmeister, R.** Zwei Fälle von angeborener Irideremie. *Arch. f. Ophthal.*, LIX, S. 31.
1904. **Alexander.** Angeborene beiderseitige Irideremie. *Münch. med. Wochenschr.*, S. 1225. Abst. in Nagel's Jahresbericht.
1905. **Hamilton, T. K.** A family with irideremia. *The Ophthalmoscope*, Oct. Abst. in *Ann. of Ophthal.*, 1906.
1909. **Cunningham, J. F.** A case of aniridia, with a family history of the condition in four generations. *Trans. of the Ophth. Soc. of the United Kingd.*, XXIX, p. 131, and *Ophth. Review*, p. 89. (Chart.)
1914. **Laserew and Petrow.** Congenital Aniridia. *Viestnik. Ophthal.*, v. 30, p. 689. *Klin. M. f. Augenh.*, Feb., p. 329.
1915. **Lewis, Archibald Cary.** A case of complete irideremia in a child whose father has bilateral coloboma of the iris. *The Ophthalmic Record*, p. 134. (Chart.)
1915. **Risley, S. D.** Hereditary Aniridia. *Journ. A. M. A.*, April 17, vol. 64, No. 16. (Unusual record—the number affected is so large as to suggest some cause other than heredity.)
1917. **Hill, E.** Case of Aniridia. (Dis.) *Chicago Ophth. Soc.*, Feb., 1917. *Ophth. Rec.*, v. 26, p. 260.
1921. **Clausen.** Aniridia Congenita und Heredität. (Vereinig. d. Augenärzte d. Prov. Sachsen, Anhalt u. Thüringen, Halle, Sitzg., v. 29, V, 1921.) *Klin. Monatsbl. f. Augenheilk.*, Bd. 67, Juli-H., S. 116–117.
1923. **Lindberg, J. G.** Beitrag zur Kenntnis der kongenitalen Aniridie, Totale und partielle Aniridie sowie "Aniridie" mit erhaltener Iris in einer Familie. *Finska läkaresällskapets handlingar*, Bd. 65, Nr. 1/2, S. 38–47. (Finnisch.)
1926. **Lewis, J.** Aniridia in four generations. *Med. J. of Australia*, 13, i: 489. Chart. (10 individuals, 7 aniridia, 1 defective iris. "Direct" heredity.)

27. Choroid

(See also Section 41)

1874. **Gleitsmann**. Ueber ein Colobom der Choroidea. Inaug. Diss. Greifswald. Quoted by DeBeck.
1926. **Marshall, J. C.** Cases of peripheral choroiditis. Proc. Roy. Soc. Med., 20: Sect. of Ophthal., 65-67. (2 brothers and male cousin.)

28. Lens (General)

1916. **Francis, L. M.** Coloboma of lens and perinuclear cataract. (1 ill.) Ophth. Rec., v. 25, p. 526.

29. Ectopia Lentis

Rule of Inheritance: Probably Dominant

(See also Sections 2, 31, 56)

1859. **Sippel, F. W. Th.** Die spontane Luxation der Linse und ihre angeborene Ektopie. Inaug. Diss. Marburg.
1874. **Keyser, P. D.** Congenital hereditary dislocation of both lenses. Phila. Med. and Surg. Reporter, Jan.
1875. **Williams, E.** Spontaneous luxation of the lens. Trans. Amer. Ophthal. Soc., p. 291.
1877. **Becker, O.** Pathologie und Therapie des Linsen-systems. Graefe-Saemisch Handbuch der gesammten Augenheilk., Bd. V, S. 247.
1878. **Wordsworth.** Congenital displacement of crystalline lens. Lancet, June 19, 1878, p. 86. Abst. in Nagel's Jahresbericht.
1879. **Bresgen, H.** Zur Heredität der Linsenluxation. Centralblatt f. prakt. Augenheilk., April, S. 104.
1879. **Jones, McNaughton.** Symmetrical ectopia with dislocation of the lens. Dublin Journ. of Med. Sciences, Feb.
1879. **Morton, A. S.** Congenital displacement of both lenses. Royal London Ophth. Hos. Reports, IX, 3, p. 435.
1883. **Mules, H.** Hereditary transmission of ectopia lentis. Ophth. Review, p. 48.
1887. **Thompson, J. L.** Observation on displacement of crystalline lens from congenital and other causes. Journ. A. M. A., Nov. 26, p. 674.
1892. **Friebis, Geo.** Double congenital dislocation of the lens. Journ. Amer. Med. Assn., Sept. 3, p. 277.
1892. **Zirm, E.** Beiderseitige Ectopia lentis bei zwei Geschwistern. Wien. klin. Wochenschr., S. 309.
1895. **Sous, G.** Ectopie du cristallin. Ann. d'ocul., CXIV, p. 390. Abst. in Nagel's Jahresbericht.
1896. **Tiffany, F. B.** Ectopia lentis. Ophthalmic Review, p. 62. Journ. Amer. Med. Assn., Nov., 1895.
1897. **Damianos, N.** Zwei Fälle von Ectopia pupillae et lentis. Deutschmann's Beiträge z. prakt. Augenheilk., Bd. XXIX, S. 48.
1897. **Sattler, H.** Ueber operative Behandlung der Ectopia lentis congen. Ber. u. d. 26. Versammlung d. ophth. Gesellschaft, Heidelberg, S. 233.
1898. **Parker, E. T.** Five cases of congenital, bilateral, symmetrical displacement of the lens of the eye in three successive generations of one family. Journ. A. M. A., Sept. 24.

1898. **Wilder, W. H.** Ueber einige Fälle von hereditärer Ectopia lentis. Amer. Med. Assn. Die Ophth. Klinik, III, S. 61.
1899. **Ginestous, E.** Luxation congénitale du cristallin. Soc. d'anat. de Bordeaux, Nov. 27. Abst. in Nagel's Jahresbericht.
1899. **Stricker, L.** The crystalline lens system, p. 235. Quoted by Nettleship.
1900. **Baretto.** Double luxation familiale du cristallin. XIII Congress Int. de Méd. Paris.
1900. **Ginestous, E.** La luxation congénitale bilatérale du cristallin. Recueil d'Ophthal., p. 282. Abst. in Nagel's Jahresbericht.
1900. **Schmidt-Rimpler, H.** Ueber Linsen-Luxationen. Ber. ü. die 28. Versamm. d. ophth. Gesell. Heidelberg, S. 57.
1902. **Eha, L.** Beitrag zur Kasuistik der Ectopia lentis congenita. Inaug. Diss. Tübingen.
1904. **Lewis, G. C.** Hereditary ectopia lentis, with report of cases. Arch. of Ophth., XXXIII, No. 3, p. 275. (Chart.)
1904. **Paton, Leslie.** Two cases of congenital dislocation and malformation of the lenses occurring in a brother and sister. Ophth. Review, p. 180. Abst. in Nagel's Jahresbericht.
1904. **Worth, Claud.** Cases illustrating congenital dislocation of the lens in 5 generations. Ophthal. Review, p. 151. Abst. in Nagel's Jahresbericht.
1905. **Hess, C.** Pathologie und Therapie des Linsensystems. In Graefe-Saemisch Handbuch d. gesamm. Augenheilk., 2te Auf., II Th., VI Bd., IX Cap., S. 132.
1906. **Terrien, F. et Hubert.** Ectopie bilatérale du cristallin congénitale dans trois et peut-être quatre générations. Recueil d'Opht., p. 721.
1909. **Adams, P. H.** A family with congenital displacement of lenses. Trans. of the Ophth. Society of the United Kingd., XXIX, p. 274, and Ophth. Review, p. 213. (Chart.)
1911. **Dehenne and Baillart.** Bull. de la Soc. Fran. d'Ophthal., p. 227. (Chart.)
1911. **Hosford, J. S.** Family of six out of seven children had congenital dislocation of both lenses. Trans. Ophthal. Soc. of Un. King., vol. XXXI, p. 50.
1912. **Gunn, A. R.** Complete congenital dislocation of the lens; a family history. Ophthalmoscope, vol. X, p. 193. (Chart.)
1915. **Strebel, J.** Ectopia lentium cong., Ectopia pupillae, etc. Ophthalmology, vol. XI, pp. 790-791, July.
1916. **Fleischer, B.** Abnormal smallness and globular form of lens in sister and brother. Arch. f. Augenh., v. 80, p. 248. Ophthalmology, v. 13, p. 121.
1916. **Linn, W. N.** Family with interesting eyes (ectopia lentis). Wisconsin Med. Jour., v. 15, p. 79.
1916. **Spicer, W. T. H.** Spontaneous dislocation of lens into anterior chamber in three members of same family; ectopia of pupils; extraction of lens. Trans. Ophthal. Soc. of United Kingd., v. 35, p. 353.
1918. **Spiece, W. K.** Ectopia lentis with family history. (Dis.) Amer. Jour. Ophth., v. 1, p. 681.
1921. **Arana, Juan de.** Angeborene Linsenektomie bei zwei Personen der gleichen Familie. España oftalmol., Jg. 6, Nr. 7, S. 130-131. (Spanisch.)
1921. **Arana, Juan de.** Angeborene doppelseitige Linsenektomie bei 2 Personen der gleichen Familie. Rev. méd. de Sevilla, Jg. 40, April-H., S. 5-7. (Spanisch.)

1926. **Cameron, Elizabeth.** An interesting example of hereditary dislocation of the lens occurring in four successive generations. *Brit. J. of Ophthal.*, 10: 384-386. (Chart, 14 affected in 4 generations. Only 1 male.)
1927. **Franceschetti, A.** Ectopia lentis et pupillae congenita als rezessives Erbleiden und ihre Manifestierung durch Konsanguinität. (Congenital ectopia of the lenses and pupils as a recessive inherited disease and its manifestation through consanguinity.) *Kl. Monatsbl. f. Augenhk.*, 78 (3): 351-362, 2 ped. charts, bibl. (Correlation between ectopia lentis et pupillae and myopia indicates linkage of the two diseases. The consanguinity in the two families furnishes proof, wanting up to the present, of the recessive inheritance of this anomaly.)

30. Aphakia

Rule of Inheritance: Irregular

(See also Section 28)

1841. **v. Ammon.** Krankheiten und Bildungsfehler des menschlichen Auges, III, S. 70, Berlin.
1904. **Toufesco, S.** [Reports a case of congenital aphakia and has collected fifteen other cases previously recorded.] *Ann. d'Oculist*, Aug.
1914. **Calhoun, F. P.** Bilateral coloboma of lens. *Amer. Acad. Ophth. and Oto-Laryngol.*, 1913, p. 268.

31. Cataract (General)

(See also Sections 2, 11, 28, 40, 56)

1833. **Maunoir.** Essai sur quelque points de l'histoire de la cataracte. Thèse de Paris. Quoted by Nettleship.
1850. **Bastard.** Considérations pratiques sur la Cataracte. Thèse de Montpellier.
1852. **Cooper, White.** Clinical lectures on congenital cataract. *Medical Times and Gazette*. Quoted by Picqué.
1858. **Streatfield, J. F.** Six cases of cataract in one family. *Roy. London Ophth. Hospital Reports*, I, p. 105.
1874. **Hirschberg, J.** Zur Aetiologie u. Therapie der Cataract. *Deutsch. Zeitsch. f. prakt. Heilk.*, No. 31, S. 263. Abst. in Nagel's Jahresbericht.
1874. **Klamroth, O.** Ueber Erblichkeit der Cataract. Inaug. Diss. Greifswald. Abst. in Nagel's Jahresbericht.
1879. **Adamuck, E.** Beiträge zur Pathologie der Linse. *Arch. f. Augenheilk.*, VIII, S. 150-166; 283-291. (No chart.)
1880. **Williams, A. D.** A remarkable descent of congenital cataract running through 4 generations, showing 15 cases in this history of a single family. *Trans. St. Louis Med. Soc.*, Mar. 13, p. 90.
1883. **Becker, O.** Zur Anatomie der gesunden und kranken Linsen. Wiesbaden, J. F. Bergmann.
1883. **Rampoldi, R.** Cataratta nucleo-corticale in quattro individui della intessa famiglia. *Ann. di Ottalm.*, XII, 1, p. 272. Abst. in Nagel's Jahresbericht.
1884. **Carreras-Arrago.** De las cataratas hereditarias transmissao moveamente a los individuos do mesmo sexo da quelle que foi ponto de partida. *Arch. ophth. de Lisbon*, V, No. 2, p. 3. Abst. in *Centralbl. f. prakt. Augenheilk.*, S. 466.

1886. **Bock, Emil.** Anatomischer Befund einer congenitalen, eigentümlich geformten Cataracta. *Klin. Monats. f. Augenheilk.*, S. 227.
1886. **Jeaffreson, C. S.** Clinical lectures on cataract. *Lancet*, I, pp. 387, 434, 479.
1888. **Berry, B. A.** Note on an instance of marked heredity in a form of cataract developed in early life. *Ophthal. Review*, p. 1.
1889. **Schmidt-Rimpler.** Augenheilkunde und Ophthalmoskopie, S. 374.
1889. **Thompson, T.** Heredity of cataract through 4 generations. *Lancet*, II, p. 1282.
1890. **Fukala.** Beitrag zur Erbllichkeit der Cataracta. *Inter. klin. Rundschau*. Wien, Bd. IV, S. 1155. Abst. in Nagel's Jahresbericht.
1890. **Green, J., Sr.** Notes on twenty-one cases of cataract occurring in a single family. *Trans. 26th annual meeting of the Amer. Ophthal. Society*, p. 724.
1890. **Guiot.** Cataractes congénitales. *Année med. de Caen*, XV, p. 264. Abst. in Nagel's Jahresbericht.
1891. **Blanche, Aguilar.** Cataracte héréditaire. *Revue générale d'Ophth.*, p. 352.
1891. **Schirmer, O.** Zur pathologischen Anatomie und Pathologie des Centralstares. *Arch. f. Ophth.*, XXXVII, 4, S. 22-23.
1891. **Schnabel.** Ueber Cataracta der Kinder. *Wiener med. Wochenschr.*, No. 4.
1891. **Wilson, Harold.** Hereditärer kongenitaler Star. *Journ. Ophth., Otol. and Laryng.* Abst. in Nagel's Jahresbericht. (Chart.)
1892. **Baker, A. R.** Infantile Cataract. *Journ. Amer. Med. Association*, Sept., p. 278.
1894. **Webster, D.** A case of cataract in an infant, probably inherited. *Arch. Pediat.*, XI, p. 906. Abst. in Nagel's Jahresbericht.
1896. **Hansell, H.** A congenital cataract family. *Ophth. Record*, June, p. 488.
1896. **Miles, H. S.** A number of lens cases illustrating heredity. *Ann. of Ophth. and Otol.*, July, p. 542.
1896. **Walter, O.** Zur Kasuistik der Operierten angeborenen Stare. *Centralbl. f. prakt. Augenheilk.*, Dec., S. 364.
1897. **Schanz, Fritz.** Eine Familie mit juveniler Katarakt. *Centralbl. f. Augenheilk.*, S. 264-266.
1898. **Gunn, Donald.** Notes on some forms of congenital cataracts. *Ophth. Review*, XVII, p. 129.
1898. **Westhoff, C. H. A.** Cataracte congénitale familiale. *Annal. d'Oculist*, CIX, p. 200. Abst. in Nagel's Jahresbericht.
1899. **Daust, E.** Ueber Erbllichkeit der angeborenen Katarakt. *Inaug. Diss.* Kiel.
1900. **Boulai, J.** Cataracta familiale. *Clinique opht.*, Nr. 15.
1900. **Pisentie.** Cataracte familiale congénitale. Influence de la consanguinité et de l'hérédité névropathique. *Ann. d'oculist*, T. CXXXIII, p. 354.
1900. **Wilder, W. H.** Extraction of congenitally dislocated, opaque lenses. *Ophthal. Record*, p. 174.
1902. **Hunter, D. W.** Two cases of hereditary congenital cataract, with family history. *N. Y. Eye and Ear Infirm. Reports*, Jan.
1902. **Parsons, J. G.** Report of 3 cases of congenital punctate cataract. *Ophth. Record*, p. 624.
1902. **Petit, P.** Cataracta familiale. *Rev. med. de Normandie*, Jan. Abst. in Nagel's Jahresbericht.

1903. **Gerok, M.** Klinisch-statistischer Beitrag zur Lehre der unkomplizierten Stare. Deut. Beiträge z. prakt. Augenheilk., Heft 56, S. 137.
1904. **Milliken, B. L.** The hereditary element in cataract. Amer. Journ. of Ophthal., Mar., p. 74.
1905. **Nettleship, E.** On heredity in the various forms of cataract. Royal London Ophth. Hosp. Reports, vol. XVI, III, p. 179.
1906. **Nettleship, E., and Ogilvie, F. M.** A peculiar form of hereditary congenital cataract. Trans. of the Ophth. Society of the United Kingd., vol. XXVI, p. 191, and Ophth. Review, p. 251. (Large chart.)
1906. **Wood, C. A.** Some forms of hereditary cataract. Ophthal. Record, April. (Chart.)
1907. **Chance, Burton.** An unusual form of hereditary congenital cataract occurring in several members of the family. Arch. of Ophthal., vol. XXXVI, p. 505.
1907. **Enslin.** Ein Beitrag zur familiär auftretenden Cataracta congenita. Deutsch. med. Wochenschr., No. 48, S. 1998.
1907. **Stieren, E.** A study in atavistic descent of congenital cataract through 4 generations. Ophthal. Record, Vol. XVI, p. 234.
1907. **Stock, W.** Beiträge zur angeborenen Starbildung. Klin. Monatsbl. f. Augenheilk., S. 286.
1908. **Cahuzac.** L'hérédité dans l'étiologie de la cataracte. Thèse de Toulouse.
1908. **Crzellitzer.** Stammbaum einer Starfamilie nebst methodologischen Bemerkungen über die Darstellung von Stammbäumen für medizinisch-biologische Zwecke. Deutsche med. Wochenschr., S. 1894.
1908. **Kias.** Ein Beitrag zur Lehre von der Erbllichkeit der Katarakt. Inaug. Diss. Leipzig.
1909. **Adams, P. H.** A family with congenital opacities of lenses. Trans. of the Ophth. Society of the United Kingd., XXIX, p. 274, and Ophth. Review, p. 213. (Chart.)
1909. **Harman, N. Bishop.** Pedigrees of three families with eye defects. Posterior polar cataract, Anterior polar cataract and microphthalmia. Lamellar cataract. Ophthalmic Review, XXVIII, 244-245. (No chart.)
1909. **Harman, N. Bishop.** Congenital cataract, a pedigree of five generations. Trans. of the Ophth. Society of the United Kingd., XXIX, p. 101. (Large chart.)
1909. **Nettleship, E.** Seven new pedigrees of hereditary cataract. (Ophth. Society of the United Kingd., p. 188.) Ophth. Review, p. 188.
1912. **Nettleship, E.** A pedigree of presenile or juvenile cataract. Trans. of the Ophth. Society of the United Kingd., vol. XXXII, p. 337. (Chart unusually complete.)
1913. **Campbell, J. A.** Hereditary cataract—five cases. (Journ. of Ophth. and Oto-Laryngol., April.) Abstract in Ophthalmology, vol. IX, Nr. 4, p. 547. (No chart.)
1913. **Ginestous, E.** Cataracte congénitale familiale. Gaz. hebdom. des Scienc. méd. de Bordeaux, 10 août.
1913. **Rollet et Genet.** Cataracte congénitale familiale. (Soc. d'Opht. de Lyon.) Revue générale d'opht., p. 418.
1913. **Wicheriewicz, B.** Kongenitale Katarakt und hereditäre Lues. (Polnisch) Przegląd lek., Nr. 1.
1914. **Danforth, C. H.** Family hereditary congenital cataract. Amer. Jour. Ophth., v. 31, p. 161.

1915. **Dickey, J. L.** Cataractous Families. Jour. Amer. Med. Assn., v. 55, p. 820. Journ. Amer. Med. Assn., v. 66, p. 2113.
1916. **Gantt, R. H.** Congenital cataract; hereditary influences. Southern Med. Journ., v. 19, p. 266.
1916. **Jones, D. F., and Mason, S. L.** Inheritance of congenital cataract. Amer. Nat., p. 751.
1921. **Andrassy, Karl.** Ein Beitrag zur Vererbung der Katarakt. (Univ.-Augenklin., Tübingen.) Klin. Monatsbl. f. Augenheilk., Bd. 6, Mai-H., S. 568-579.
1921. **Rowan, John, and Wilson, James Alexander.** Hereditary cataract. (Erblicher Star.) Brit. Jour. of Ophthalmol., vol. 5, No. 2, p. 64-65.
1922. **Peters, A.** Die Vererbung der Katarakt im Lichte der Konstitutionspathologie. Zeitschr. f. d. ges. Anat., 2 Abtl.; Zeitschr. f. Konstitutionsl., Bd. 8, H. 6, S. 545-550.
1923. **Grósz, Emil v.** Über die hereditären Katarakte. Orvosképzés, Jg. 13, H. 1, S. 80-83. (Ungarisch.)
1923. **Grósz, Emil.** Hereditäre juvenile Cataracta. Orvosi Hetilap, Jg. 67, Nr. 1, S. 7-8. (Ungarisch.)
1923. **Koby, F. Ed.** Cataracte familiale d'un type particulier, se transmettant apparemment suivant le mode dominant. (Familiärer Star von eigenartigem Bau, der sich anscheinend als dominantes Merkmal vererbt.) Arch. d'opht., Bd. 40, Nr. 8, S. 492-503.
1926. **Curtin, T. H.** Six cases in one family of hereditary cataract. Archives of Ophthalmol., 55: 279. (Mother and 5 of 10 children.)
1926. **Knapp, F. N.** Familial cataract: A study through five generations. Am. Jour. of Ophthalmol., S. 3, 9: 683-684. (Family chart, 40 persons, 18 affected.)
1926. **McIntosh, T. M.** Is cataract hereditary? So. Med. J., 19: 579-580. (Three families with cataract in 2 generations.)
1927. **Romer, A.** Untersuchung über die Erbllichkeit der Spiesskatarakt (Vogt). (Investigation into the heredity of spear cataract.) Arch. der Julius Klaus-Stift., 2 (2): 207-220, 4 figs., 1 ped. chart, 1 pl. (Dominant inheritance.)

32. Cataract, Lamellar

Rule of Inheritance: Dominant

(See also Section 33)

1883. **v. Arx, Max.** Zur Pathologie des Schichtstars. Inaug. Diss.
1889. **Kunn, C. J.** Vererbung d. Schichtstars in einer Familie. Wien. klin. Wochenschr., No. 3. Quoted by Nettleship.
1893. **Hirschberg, J.** Ueber Schichtstar bei älteren Menschen. Centralbl. f. prakt. Augenheilk., S. 227.
1897. **Hosch, Fr.** Eine Schichtstar-Familie, nebst Bemerkungen über diese Starform überhaupt. Münch. med. Wochenschr., S. 813. Abst. in Nagel's Jahresbericht.
1903. **Horowitz.** Eine Schichtstar-Familie. Inaug. Diss. Berlin. Quoted by Nettleship.
1909. **Harmon, N. Bishop.** Four generations of lamellar cataract. Ophth. Review, XXVIII, pp. 85-86. (No chart.)
1912. **Hilbert, R.** Schichtstarbildung durch vier Generationen einer Familie. Münch. med. Wochenschr., S. 1272.
1912. **Manson, J. B.** Hereditary lamellar cataract and digital deformity in the same pedigree. Trans. of the Ophthal. Society of the United Kingd., vol. XXXII, p. 45. (Chart.)

1926. **Kahn, W. A.** Pedigree of lamellar cataract. *Brit. J. of Ophthal.*, 10: 387-389. (3 generations, 5 out of 9 affected.)
1926. **Poos, Fritz.** Ueber eine familiär aufgetretene besondere Schichtstarform "Cataracta zonularis pulverulenta." (On the familial occurrence of a peculiar form of lamellar cataract, "Cataracta zonularis pulverulenta.") *Klin. Monatsbl. f. Augenhk.*, 76: 502-507. (Mother and 4 daughters. Perhaps due to metabolic disturbance dependent on an inherited factor.)

33. Cataract, Zonular

Rule of Inheritance: Probably Dominant

(See also Section 32)

1890. **Derby, H.** Eight cases of rudimentary zonular double cataract among ten members of the same family. *Trans. 26th Ann. Meeting of the Amer. Ophth. Society*, p. 722.
1897. **Mulder, M. E.** Ein Fall von Lenticonus posterior, anatomisch untersucht. *Klin. Monatsbl. f. Augenheilk.*, S. 409.
1900. **Bennett.** Ueber die Aetiologie der Cataracta zonularis. *Engl. Ophth. Ges.*, 8 Nov. *Arch. f. Augenheilk.*, XLIII, S. 93.
1911. **Collomb, A.** Hérité et cataractes zonulaires. *Arch. d'Opht.*, p. 549.

34. Cataract, Polar

Rule of Inheritance: Dominant

1877. **Knies, Max.** Ueber den Spindelstar. *Archiv. f. Ophth.*, XXIII, 2, 211. Quoted by Nettleship.
1892. **Zirm, Ed.** Doppelseitiger Sternstar, Cat. stellata, bei mehreren Mitgliedern einer Familie mit vererbter Myopie. *Klin. Monatsbl. f. Augenheilk.*, S. 5-14 u. 40.
1910. **Harman, N. Bishop.** Case from families with hereditary anterior and posterior polar cataract. *Ophth. Review*, p. 440.
1913. **Holloway, T. B.** Unusual types of punctate cataract. Anterior polar cataract, with diffuse punctate opacities. *Ophthalmic Record*, Aug., vol. XXII, p. 407. (No chart.)
1915. **Ziegler, S. L., and Griscom, J. M.** Hereditary posterior polar cataract. Pedigree. *Amer. Oph. Soc.*, v. 114, p. 356.

35. Cataract, Discoid

Rule of Inheritance: Dominant

1909. **Smith, Priestley.** A pedigree of congenital discoid cataract. *Ophth. Review*, p. 341.
1911. **Dorrell.** A family affected by discoid cataract. *Ophth. Society of the United Kingd.*, p. 157. *Ophth. Review*, p. 191. (Chart.)

36. Cataract, Senile

Rule of Inheritance: Dominant

1884. **Appenzeller, J. F. A.** Beitrag zur Lehre von der Erbllichkeit des grauen Stars. Mittheilung aus d. ophth. Klinik in Tübingen, II, 1, S. 120. Abst. in *Nagel's Jahresbericht*, p. 545.
1888. **Hosch, Fr.** Zur Erbllichkeit des grauen Stares. *Correspondenzbl. f. Schweizer Arzte*, No. 19.

1897. **Hirschberg, J.** Angeborener grauer Star als Familienübel. *Centralbl. f. prakt. Augenheilk.*, S. 271.
1897. **Purtscher, O.** Angeborener grauer Star als Familienübel. *Centralbl. f. prakt. Augenheilk.*, July, S. 198.
1908. **Nettleship, E.** Senile cataract in husband and wife; condition of the lenses in their children and grandchildren. *Trans. of the Ophthal. Society of the United Kingd.*, vol. XXVIII, p. 220. (Unusually complete chart.)
1914. **Zydek, F.** Heredity of senile cataract. Rostock Thesis.
1915. **Zydek, F.** Heredity of senile cataract. *Klin. Monatsbl. f. Augenh.*, v. 54, p. 482. *Amer. Journ. Ophth.*, v. 32, p. 235. Inaug. Diss. Rostock, 1913.
1916. **Parker, W. R.** Family cataracts through four generations. *Jour. Mich. State Med. Soc.*, v. 15, p. 188.
1926. **Garfunkel, B.** Zur Erblichkeit der Katarakta senilis. (Inheritance of senile cataract.) *Arch. d. Julius Klaus-Stift.*, 2: 72-78, 29 ped. charts, bibl. (Hereditary and non-hereditary families; the former have many more old people. Apparently a dominant trait.)

37. Retina

(See also Sections 40, 41, 55, 57)

1885. **Knapp, Herman.** Ueber angeborene, hofartige, weisgraue Trübung um die Netzhautgrube. Bericht ueber die 17 Vers. d. ophth. Ges., S. 217-219.
- 1890-91. **Syms, G. W.** A case of hereditary amaurosis. *Edinburgh Med. Journ.*, XXXVI, p. 1131.
1915. **Spicer, W. T. H.** Angioid streaks in brother and sister. *Proc. Roy. Soc. Med., Ophth. Sec.*
1916. **Spencer, F. R.** Congenital defect of choroid and retina. *Ann. of Ophth.*, v. 25, p. 647.
1917. **Zentmayer, W.** Unusual type of familial retinal degeneration. *Sec. on Ophth.*, Coll. Phys. Philadelphia, Jan. 18, 1917.
1921. **Salzmann, Maximilian.** Über Vererbung von Netzhautablösung. (Univ.-Augenklin., Graz.) *Wien. med. Wochenschr.*, Jg. 71, Nr. 24, S. 1082-1084.
1922. **Batten, Rayner D.** Symmetrical destruction or absence of retina in macular region. Correlated to the maculo-cerebral degeneration of adolescence and infancy. (Symmetrische Zerstörung oder Defekt der Macula wie bei einer infantilen oder juvenilen maculo-cerebralen Degeneration.) *Trans. of the Ophth. Soc. of the United Kingdom*, vol. 42, p. 109-110.
1922. **Kalt.** Amblyopie familiale congénitale et syndrome adiposogénital. (Angeborene familiäre Schwachsichtigkeit mit adiposo-genitalen Begleiterscheinungen.) *Ann. d'oculist*, Bd. 159, H. 8, S. 595-599.
1926. **Peiper, A.** Über die Helligkeits- und Farbenempfindungen der Frühgeburten. (On the sensitivity of the prematurely born to light and color.) *Arch. f. Kinderhkl.*, 80 (1): 1-20, 17 curves, bibl. (Sensitivity to light intensity already present before birth; rods and cones both functional; infants not all color blind.)
1927. **v. Hippel.** Über Angiomatosis retinae [v. Hippelsche Krankheit] und ihre Beziehungen zu Allgemeinleiden. (On angiomatosis of the retina, v. Hippel's disease, and its relation to general disease.) *Klin. Wchnschr.*, 6 (3): 138. (Heredity plays an important role. Multiple capillary angiomas of the retina. Not infrequently accompanied by angiomatosis of the central nervous system. Brief note.)

1927. **Rochat, G. F.** Familiäre Angiomatosis retinae und Kleinhirngliom. (Familial angiomatosis of the retina and angioma of the small brain.) *Klin. Monatsbl. f. Augenheilk.*, 78 (5): 601-612. Ped. chart, 15 illus., bibl. (Description of cases of angiomatosis retinae in two generations of a family, associated in the same family with cases of tumors [cysts or angiomas] of the small brain.)

38. Macular Degeneration

Rule of Inheritance: Dominant

(See also Sections 37, 57)

1885. **Magnus, H.** Eigentümliche kongenitale Bildung der Macula lutea auf beiden Augen. *Klin. Monatsbl. f. Augenheilk.*, S. 42-45.
1887. **Wadsworth, O. F.** Congenital zonular opacity around the fovea. *Trans. of the Amer. Ophthal. Soc.*, p. 572.
1888. **Hirschberg, J.** Der graublaue Hof um den gelben Fleck. *Centralbl. f. Augenheilk.*, S. 14-15.
1898. **Hirsch, William.** The pathological anatomy of a fatal disease of infancy, with symmetrical changes in the region of the yellow spot. *Journ. of Nerv. and Ment. Disease*, p. 538.
1914. **Batten, F. E.** Family cerebral degeneration with macular change. *Quart. Jour. Med.*, July 28.
1914. **Darier, A.** Progressive familial macular degeneration. *Clin. Ophth.*, v. 20, p. 3.
1914. **Onishi.** Changes in macula lutea with hereditary optic neuritis (1 ill.). *Nippon Gank. Zasshi*, Oct.
1914. **Onishi.** Hereditary optic neuritis; macular changes (5 ill.). *Nippon Gank. Zasshi*, Nov.
1915. **Funccius.** So-called coloboma of macula. *Tübingen. Klin. M. f. Augenh.*, 53, p. 585.
1915. **Hubert, G.** Coloboma of macula and hole formation in retina. *Munich Thesis*.
1915. **Masuda.** Family progressive degeneration of macula. *Nippon Gank. Zasshi*, Dec.
1915. **Pusey, E.** Family degeneration of macula lutea. *Cause. Amer. Oph. Soc.*, v. 14, p. 364.
1916. **Feingold, M.** Progressive Macular Degeneration in Three Members of a Family. *Sec. Ophth., A. M. A.*, p. 312.
1916. **Forsmark, E.** Coloboma of Choroid and Macula. 1 pl. *Bibl. Svenska Läkare. Handl.*, v. 42, p. 442.
1917. **Wada.** Hereditary Progressive Degeneration of Macula. (1 col. pl., 3 ill., bibl.) *Nippon Gank. Zasshi*, Oct., 1917.
1918. **Clark, H. S.** Familial Macular Degeneration with and without Dementia. *Sec. on Ophth., A. M. A.*, 1918, p. 104.
1918. **Stargardt, K.** Familial Pigmentation in Macula. *Abst. Klin. M. f. Augenh.*, v. 60, p. 412.
1921. **Becker, Fritz.** Zwölf Fälle doppelseitiger Degeneration der Macula lutea. (Univ.-Augenklin., Jena.) *Klin. Monatsbl. f. Augenh.*, Bd. 66, Mai-H., S. 700-706.
1921. **Behr, Carl.** Die Anatomie der "senilen Macula" (der senilen Form der macularen Heredodegeneration). (Univ.-Augenklin., Kiel.) *Klin. Monatsbl. f. Augenheilk.*, Bd. 67, November-Dezember-H., S. 551-564.

1921. **Clausen.** Typisches, beiderseitiges hereditäres Macula-Kolobom. (Vereinig. d. Augenärzte d. Prov. Sachsen, Anhalt u. Thüringen, Halle, Sitzg., v. 29, V, 1921.) Klin. Monatsbl. f. Augenheilk., Bd. 67, Juli-Dezember-H., S. 116.
1921. **Clausen.** Heredo-Degeneration der Macula. (Vereinig. d. Augenärzte d. Prov. Sachsen, Anhalt u. Thüringen, Halle, Sitzg., v. 29, V, 1921.) Klin. Monatsbl. f. Augenheilk., Bd. 67, Juli-H., S. 117-118.
1921. **Vossius, A.** Über die Bestsche familiäre Maculadegeneration. v. Graefe's Arch. f. Ophthalmol., Bd. 105, S. 1050-1057.
1922. **Kranz, Heinrich Wilhelm.** Über Heredodegeneration der Macula lutea. (Ein Beitrag.) Beobachtet an Fällen der Univ.-Augenklinik zu Freiburg i.B., 1921. Dissertation: Freiburg i.B., 1922, 33S.
1922. **Weisel, Gertrud.** Beitrag zur Bestschen hereditären Maculaerkrankung mit besonderer Berücksichtigung. (Vererbung.) Dissertation: Giessen, 1922. 22S.
1923. **Alkio, V. V.** Heredodegeneratio maculae centralis retinae bei vier Geschwistern. (Univ.-Augenklin., Helsingfors.) Acta ophth., Bd. 1, H. 1, S. 27-38.
1923. **Hine, Montague L.** Two cases of early familial maculo-cerebral degeneration. (Zwei Fälle von Maculocerebraler Degeneration.) Proc. Roy. Soc. Med., vol. 16, No. 7, Sect. of Ophth., p. 18-19.
1923. **Lewina, L. S.** Familiäre hereditäre Degeneration der Macula lutea. (Augenklin., II, Univ. Moskau, Prof. Awerbach.) Rus-ski Ophth. Journal, Bd. 2, Nr. 1, S. 44-46. (Russisch.)
1923. **Nardin, W. H., and Cunningham, R. S.** Familial retino-cerebral degeneration. (Familiäre maculo-cerebrale Degeneration.) Amer. Journ. of Ophth., vol. 6, No. 6, p. 476-484.
1926. **Tiscornia, A.** Coroiditis macular hereditaria y familiar. (Hereditary familial macular choroiditis.) Rev. Assoc. med. Argent., 39: 239. (Bilateral choroiditis in four members of a family. Behr's "heredo-degeneration of the macula.")
1926. **Vogt, A.** Über Maculalosigkeit bei isoliertem Bulbusalbinismus als geschlechtsgebunden recessives Merkmal. (On absence of macula in isolated bulb-albinism as recessive sex-linked character.) Arch. d. Julius Klaus-Stift., 1: 119-122, 3 ped. chts. (Association with albinism of the bulb and aniridia.)

39. Color Blindness

Rule of Inheritance: Sex Linked

(See also Sections 2, 59)

1875. **Stilling.** Beiträge zur Lehre von den Farbenempfindungen. Klin. Monatsbl. f. Augenheilk., XIII, Beilageheft 2.
1878. **Cohn u. Magnus.** Untersuchung von 5,000 Schulkindern in Bezug auf Farbenblindheit. Centralbl. f. Augenheilk., S. 97-99.
1878. **Holmgren, A. F.** Ueber die Farbenblindheit in Schweden. Centralbl. f. Augenheilk., S. 206.
1879. **Becker, Otto.** Ein Fall von angeborener totaler Farbenblindheit. Arch. f. Ophth., XXV, 2, S. 205-212.
1880. **Schmitz, A.** Statistische Mitteilungen über das Vorkommen von Farbenblindheit in Cleve und Umgegend. Centralbl. f. Augenheilk., S. 276.

1882. Billinger, O. Ueber Vererbung von Krankheiten. Beiträge zur Biologie. Festschrift f. L. W. v. Bischoff.
1883. Hilbert, R. Bemerkungen zu den günstigen Erfolgen der Ausbildung des Farbensinnes. Centralbl. f. Augenheilk., S. 94.
1888. Kroll, W. Zur Ausbildung des Farbensinnes. Centralbl. f. Augenheilk., S. 243.
1894. Mauthner, L. Farbenlehre. 2 Aufl., S. 144. Wiesbaden.
1895. Reber, W. Six Instances of Color Blind Women Occurring in Two Generations of One Family. Medical News, Philadelphia, LXVI, 95-97.
1898. Pflüger, E. Beobachtungen an total Farbenblinden. Ber. über d. 27 Vers. d. Ophth. Gesell. zu Heidelberg, S. 166. Quoted by Groenouw.
1905. Nettleship, E. Cases of Color-Blindness in Women. Ophthal. Soc. Trans., v. 26.
1912. Langdon, H. M. Hereditary deficiency of the light sense. (Sect. on Ophth., College of Phys. of Philadelphia.) Ophthal. Record, p. 200.
1912. Nettleship, E. Some unusual pedigrees of colour blindness. Trans. of the Ophth. Society of the United Kingd., vol. XXXII, p. 309. (Charts.)
1912. Nettleship, E. A pedigree of four families containing colour-blind members with certain unusual facts connected with them. (Ophth. Society of the United Kingd., p. 309.) Ophth. Review, p. 223. (4 charts.)
1912. Usher, C. H. A pedigree of colour-blindness. Trans. of the Ophth. Society of the United Kingd., vol. XXXII, p. 352. (Large chart.)
1914. Nettleship, E. Pedigree of Color Blindness, including two color blind females. Roy. London Ophth. Hosp. Rep., v. 19, p. 319.
1914. Waardenburg, P. J. Inheritance of Color Blindness. Nederl. Tijdsch. v. Geneesk., May 16, Jour. A. M. A., v. 63, p. 1064.
1915. Bateson, W. Inheritance of Color Blindness. Ophthalmology, 11, p. 423. (Important.)
1915. Nettleship, E. Pedigrees of Color Blindness. Roy. London Ophth. Hosp. Rep., 20, p. 93.
1916. Hegner, C. A. Congenital Monocular Disturbance of Color Sense. Zeit. f. Sinnesphysiol., v. 49, p. 18. Ophthalmology, v. 13, p. 157.
1918. Colline, G. L. Color Blindness, Its Relation to Ocular Conditions and Bearing on Public Health, etc. Washington, Gov. Printing Off., 1918.
1921. Clausen. Die Vererbung der Farbenblindheit. Dtsch. opt. Wochenschr., Jg. 7, Nr. 30, S. 544-546.
1921. Döderlein, Gustav. Über die Vererbung von Farbensinnstörungen. (Univ.-Augenklin., München.) Arch. f. Augenheilk., Bd. 90, H. 1, S. 43-66.
1922. Schiötz, Ingolf. Rotgrünblindheit als Erbeigenschaft. (Univ.-Augenlinik, Kristiania.) Klin. Monatsbl. f. Augenheilk., Bd. 68, April-Mai-H., S. 498-526.
1922. Vogt, A. Totale Farbenblindheit. (Ges. d. schweiz. Augenärzte, Schaffhausen, Sitzg., v. 24-25, VI, 1922.) Klin. Monatsbl. f. Augenheilk., Bd. 69, Juli-H., S. 121-123.
1922. Vogt, A., und Klainguti, R. Weitere Untersuchungen über die Entstehung der Rotgrünblindheit beim Weibe. (Univ.-Augenklin., Basel.) Arch. f. Rassen- und Gesellschafts-Biol., Bd. 14, H. 2, S. 129-140.

1925. **Just, G.** Zur Vererbung der Farbensinnstufen beim Menschen. (On heredity of color sense in man.) Arch. f. Augenhlk., 96: 406-418, 9 charts. (Schematic pedigree charts to illustrate such possibilities of the hereditary transmission as have actually been observed. Discussion of the charts and of family histories reported by Hess and Döderlein.)
1926. **Hartung, H.** Ueber drei familiäre Fälle von Tritanomalie. (On three familial cases of tritanomaly.) Klin. Monatsbl. f. Augenhlk., 76: 229-240. (Chart, 3 generations, 10 persons. Author and two maternal uncles are trichromates but tritanomalous, i. e., deficient in color sense, especially for blue and yellow.)
1926. **Haupt, I.** The Nela test for colorblindness applied to school children. J. Comp. Psychol., 6: 291-302. (Girls discriminate color better than boys; 4 p. c. boys and 1.3 p. c. girls colorblind.)
1926. **Siemens, H. W.** Eine prinzipiell wichtige Beobachtung über die Vererbung der Farbenblindheit. (An observation on the inheritance of color blindness, weighty in principle.) Klin. Monatsbl. f. Augenhlk., 76: 769-776, 1 ped. chart, bibl. (The differences in manifestation in the origin of human hereditary defects play an unexpectedly large rôle.)
1927. **Lina, P.** Zur Kenntnis der Vererbung der totalen Farbenblindheit mit besonderer Berücksichtigung der in der Schweiz bis jetzt nachgewiesenen Fälle. (On the inheritance of total color blindness with special reference to the Swiss cases.) Arch. der Julius Klaus-Stift., 2 (2): 143-189, 5 figs., 7 ped. charts, 3 tabs., bibl. (An excess—3:2—of maleness in affected persons. A Mendelian recessive trait. Consanguinity common.)

40. Night Blindness

Rule of Inheritance: Irregular Dominant; also Recessive Sex Linked

1838. **Cunier, F.** Hist. d'un héméralopie héréd. depuis deux siècles dans une famille, etc. Ann. d'ocul., 1, 2, S. 31, Anm.
1854. **Donders, F. C.** Torpor ret. congenitus hereditarius. Neder. Lancet, May, June. Quoted by Siegheim and Leber.
1857. **Förster.** Ueber Hemeralopie und die Anwendung eines Photometer. Breslau, S. 42. Quoted by Siegheim and Leber.
1861. **Maes.** Torpor retinae. 2. Jahresbericht d. Utrechter Augenklinik, S. 201-205.
1874. **König, Heinrich.** Zwei Beobachtungen von mangelhafter Entwicklung der Choroides, verbunden mit Hemeralopie. Diss. Griefswald.
1878. **Paganstecher, H.** Ueber Erbllichkeit der Hemeralopie. Centralbl. f. prakt. Augenheilk., Aug.
1881. **Pflüger, Ernst.** Stammbaum einer Familie, in welcher Hemeralopie neben hochgradiger Myopie sich forterbt. Jahresbericht über die Universitäts-Augenklinik in Bern.
1885. **Sedan.** Une famille d'héméralopes. Rec. d'opht., p. 734.
1887. **Nettleship, E.** Nightblindness. Ophth. Review, p. 181.
1895. **Atwool, Tillinghast.** Two cases of hereditary congenital night blindness. Royal London Ophthalmic Hospital Reports, XIV, p. 260.
1898. **Ammann.** Das Vererbungsgesetz der Hämophilie und der Nachtblindheit. Correspondenzblatt f. Schweizer Ärzte No. 20.
1904. **Bessonnet.** Héméralopie héréditaire sans lésions rétiniennees. Annal. Méd.-Chir. du centre Tours, May. Abst. in Nagel's Jahresbericht.

1904. **Galezowski, J.** Rétinite ponctuée albescente congénitale; héméralopie congénitale. *Recueil d'Ophth.*, p. 714. Abst. in *Nagel's Jahresbericht*.
1907. **Nettleship, E.** History of night blindness in 9 consecutive generations. *Trans. Ophth. Soc. United Kingd.*, June 13, 1907. Abst. in *Amer. Journ. of Ophthal.*, Sept., 1907, vol. XXIV, p. 270.
1908. **Bordley, J., Jr.** A Family of Hemeralopes. ["Congenital night blindness traced to five generations."] *Johns Hopkins Hosp. Bull.*, XIX, 278-280, 1 pl.
1909. **Truc, H.** Complément généalogique d'une grande famille d'héméralopes remontant à plusieurs siècles. (*Soc. franc. d'Ophth.*) *Recueil d'Ophth.*, p. 160.
1912. **Nettleship, E.** A Pedigree of Congenital Night Blindness with Myopia. [Divides congenital stationary night-blindness into two varieties.] *Trans. Ophthal. Soc. of United Kingd.*, vol. XXXII, p. 21.
1913. **Newman, H. H.** Five generations of congenital stationary night-blindness in an American family. *Journ. of Genetics*, vol. 3, Nr. 1.
1921. **Neurath, R.** Ererbte idiopathische Hemeralopie. *Mitt. d. Ges. f. inn. Med. u. Kinderheilk.*, Wien, Jg. 20, Nr. 3, S. 169-170.
1922. **Rosenstein, A. Maria.** Retinitis pigmentosa bei schwerer Blutschande. *Klin. Monatsbl. f. Augenheilk.*, Bd. 68, Januar-Februar-H., S. 204-205.
1924. **Kawakami, R.** Ueber die Vererbung der Oguchischen Krankheit. (Eine in Japan vorkommende Form von angeborener Nachtblindheit.) (The inheritance of Oguchi's disease. A form of congenital nightblindness occurring in Japan.) *Klin. Monatsbl. f. Augenhk.*, 72: 340-349. (A form of night-blindness with peculiar coloring of the eye background in 6 members of the latest generation of two families united by double marriage. The disease appeared in the descendants from both marriages. Eighteen pedigree charts from the Japanese literature.)
1925. **Truc et Opin.** Un ancien foyer provençal d'héméralopie Nougarienne. (Héméralopie congénitale, familiale, héréditaire, type Nougaret, de Vendémian.) (An old provençal centre of hemeralopia of the Nougaret type.—Congenital, familial, hereditary hemeralopia, Nougaret type, of Vendémian.) *Soc. française d'ophtal.*, *Bull. et mém.*, 38: 626-631. (Six pedigree charts of families living in the isolated village of Néoules, near Vendémian. One hundred forty-two persons, 42 affected with Nougaret type of night blindness. Work complementary to work done with Nettleship by one of the authors.)
1925. **Varelmann, H.** Die Vererbung der Hemeralopie mit Myopie. Ein Beitrag zur Vererbung der geschlechtsgebundenen Krankheiten. (The inheritance of hemeralopia with myopia. Contribution to the inheritance of sex-linked diseases.) *Arch. f. Augenhk.*, 96: 385-405, 6 ped. charts, 3 tabs., bibl. (One chart by the author, 6 generations, 4 affected. Other charts from literature. The theory that this type of hemeralopia is a recessive sex-linked disease is supported.)
1926. **Oguchi, Ch.** Weitere Mitteilung über die Oguchische Krankheit. (Further report on Oguchi's disease.) *A. von Graefe's Archiv. f. Ophthal.*, 117: 208-218. (Two charts, both showing consanguinity, and the first showing cases of hemeralopia, cataract, myopia, feeble-mindedness. Recessive inheritance of Oguchi's disease. Classification of heritable hemeralopic diseases.)

1927. **Scheerer, R.** Der erste sichere Fall von Oguschischer Krankheit mit Mizuoschem Phänomen ausserhalb Japans (angeborene Nachtblindheit mit weissgrauer Verfärbung des Augenhintergrundes, die nach längerem Dunkelaufenthalt verschwindet.) (The first sure case of Oguchi's disease with Mizuo's phenomenon outside Japan: congenital nightblindness with gray-white coloring of the eye background, which disappears after prolonged sojourn in the dark.) *Kl. Monatsbl. f. Augenhik.*, 78 (6): 811-813. (Single case.—A cousin on paternal side night-blind but not examined.)

41. Retinitis Pigmentosa

Rule of Inheritance: Usually Dominant—Rarely Sex Linked

(See also Sections 40, 59)

1858. **v. Graefe, Albrecht.** Exceptionelles Verhalten des Gesichtsfeldes bei Pigmententartung der Netzhaut. *Arch. f. Ophth.*, IV, 2, S. 250-253.
1861. **Liebreich, Richard.** Abkunft aus Ehen unter Blutsverwandten als Grund von Retinitis pigmentosa. *Deutsche Klinik*, No. 6.
1863. **Mooren, Albert.** Ueber Retinitis pigmentosa. *Klin. Monatsbl. f. Augenheilk.*, I, S. 105.
1867. **Hutchinson.** Cases of retinitis pigmentosa with remarks. *Ophth. Hosp. Rep.*, VI, p. 30-42.
1869. **Leber, Th.** Ueber Retinitis pigmentosa und angeborene Amaurose. *Arch. f. Ophth.*, XV, 3, S. 4.
1872. **Bayer, W.** Ueber Retinitis pigmentosa. *Inaug. Diss. Bonn.*
1873. **Frickenhaus, G. G.** Beitrag z. Aetiologie u. Ther. d. typ. Pigment-Entartung der Retina. *Inaug. Diss. Marburg.*
1874. **Schmidt, H.** Zur Heredität der Retinitis pigmentosa. *Klin. Monatsbl. f. Augenheilk.*, XII, S. 29-32.
1877. **Leber, Th.** Die Krankheiten der Netzhaut und des Sehnerven. In *Graefe-Saemisch Handbuch der gesamten Augenheilkunde*, Bd. V, Chapter VIII, S. 650.
1878. **Webster, David.** The aetiology of retinitis pigmentosa, with cases. *Trans. Amer. Ophthal. Soc.*, p. 495.
1879. **Hirschberg, J.** Retinitis pigmentosa. *Berliner klin. Wochenschr.*, No. 47.
- 1881-82. **Hutchinson, J.** On retinitis pigmentosa and allied affections as illustrating the laws of heredity. *Ophth. Review*, I, 2, 26.
1882. **Derigs, G.** Ueber Retinitis pigmentosa. *Inaug. Diss. Bonn.*
1883. **Quaglino, A.** Intorno alla retinite pigmentosa. *Ann. di Ottalm.*, XII, 5, p. 372. Abst. in *Nagel's Jahresbericht*.
1883. **Rampoldi, R.** Retinitis pigmentosa in 4 fratelli pellagrosi. *Ann. di Ottalm.*, XII, p. 268. Abstract in *Nagel's Jahresbericht*.
1884. **Denti, F.** Sulla retinite pigmentosa. *Gaz. med. Italiana-Lombard.*, No. 12. Quoted by Schneider.
1885. **Ancke, Rich.** Beiträge zur Kenntniss von der Retinitis pigmentosa. *Centralbl. f. prakt. Augenheilk.*, June, S. 167.
1885. **Wider, A.** Ueber die Aetiologie der Retinitis pigmentosa. *Mitt. a. d. ophth. Klinik in Tübingen*, II, 2, S. 212.
1886. **Ayres, S. C.** Retinitis pigmentosa. *Amer. Journ. of Ophth.*, p. 81.
1886. **Davidson, A. D.** Congenital blindness from optic atrophy and pigmentary retinitis. *Brit. Med. Journ.*, I, p. 72.

1886. Siegheim. Beiträge zur Kenntniss der Retinitis pigmentosa unter besonderer Rücksichtnahme auf die Aetiologie. Inaug. Diss. Breslau.
1886. Snell, S. Nictalopia (ret. pigm.) occurring in several members of the same family. Ophthal. Review, V, p. 72.
1887. Daguillon. Retinite pigmentaire héréditaire. Bull. de la clin. nat. des Quinze-Vingts, V, p. 103.
1887. Darier, A. Quelques observations de rétinite pigmentaire avec anomalies intéressantes. Arch. d'opht., T. VII, p. 170. Abst. in Nagel's Jahresbericht.
1890. Kaupp, M. Ueber Retinitis pigmentosa. Inaug. Diss. Freiburg i. Br. Quoted by Herrlinger.
1890. Schmidt, Ernst. Ueber Retinitis pigmentosa. Inaug. Diss. Bonn.
1891. Ransohoff, M. Zur Kenntniss der Retinitis pigmentosa. Klin. Monatsbl. f. Augenheilk., S. 271.
1893. Neuffer, F. Ueber den Einfluss der Heredität und der Consanguinität der Eltern in der Aetiologie der Retinitis pigmentosa. Inaug. Diss. Strasburg.
1894. Reinecke. Ein Beitrag zur Kenntniss der Retinitis pigmentosa. Inaug. Diss. Kiel. Quoted by Herrlinger.
1895. Cutler, C. W. Drei ungewöhnliche Fälle von retino-choroideal Degeneration. Arch. f. Augenheilk., S. 117.
1895. Cutler, C. W. Ueber angeborene Nachtblindheit und Pigmentdegeneration. Arch. f. Augenheilk., Bd. XXX, S. 92.
1895. Roy, D. Retinitis pigmentosa. Report of a case. Ann. of Ophthal. and Otol., IV, p. 24.
1896. Schneider, H. Ueber die Erbllichkeit der Retinitis pigmentosa nebst Mittheilung eines Falles von Retinitis pigmentosa hereditaria in fünf Generationen einer Familie. Inaug. Diss. Berlin.
1899. Herrlinger, C. L. Ueber die Aetiologie der Retinitis pigmentosa mit besonderer Berücksichtigung der Heredität und der Consanguinität der Eltern. Inaug. Diss. Tübingen.
1900. Rosenbaum, O. Ueber Retinitis Pigmentosa. Inaug. Diss. Kiel. Quoted by Nettleship.
1901. Blessig, Ernst. Alternierendes Auftreten von Glaucoma simplex und Retinitis pigmentosa an einer Reihe von Geschwistern. Klin. Monatsbl. f. Augenheilk., S. 404. Quoted by Groenouw.
1903. Aubineau, E. Three out of five children of second cousins affected by retinitis pigmentosa. Annal. d'Oculist, June.
1903. Snell, S. Retinitis pigmentosa in 5 generations. Ophthal. Review, p. 30. Trans. Oph. Soc. of the United Kingd., 1903, p. 68. (Chart.)
1904. Dujardin. Rétinite pigmentaire anormale chez deux frères jumeaux. Clinique opht., p. 125. Abst. in Nagel's Jahresbericht.
1907. Cabannes. Des relations de la rétinite pigmentaire fruste avec la névrite optique rétro-bulbaire héréditaire. Arch. d'opht., T. XXVII, p. 642-650.
1907. Nettleship, E. Retinitis pigmentosa and allied diseases. Royal London Ophth. Hosp. Reports, XVII, March, p. 1.
1907. Snell, S. Retinitis pigmentosa occurring in several members of a family. Trans. Ophthal. Society United Kingd., p. 217, Jan. 31, 1907. Abst. in Ophthal. Record, Mar., XVI, p. 143. (Chart.)
1909. Nettleship, E. Retinitis pigmentosa. ["Found heredity without consanguinity in 230. . ."] Royal London Ophthal. Hospital Reports, vol. XVII, p. 4; Trans. Ophthal. Soc. of Un. Kingd., vol. XXIX, p. 95. (Chart.)

1911. Seefelder, R. Nochmals zur Frage der Netzhaut-anomalien in sonst normalen fötalen menschlichen Augen. v. Graefe's Arch. f. Ophth., LXXIX, S. 378.
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42. Optic Nerve-Atrophy (Leber's Disease)

Rule of Inheritance: Sex Linked

(See also Sections 2, 41, 43)

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- 1925a. ——— Markhaltige Nervenfasern als erbliche Anomalie. (Medullated nerve fibers as an inherited anomaly.) *Ibid.*: 355-356, 1925. (Mother and daughter affected. They are members of a family in which there are numerous cases of Leber's disease.)
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1926. **Kawakami, R.** Beiträge zur Vererbung der familiären Sehnervenatrophie. (On the inheritance of familial atrophy of the optic nerve.) *A. von Graefe's Arch. f. Ophthal.*, 116 (4): 568-595. 39 ped. chts., 2 figs., 7 tabs., bibl. (Author's chart: 5 generations, 31 affected. The inherited tendency to Leber's atrophy lies in the X chromosome and shows variable dominance in the female sex, *i. e.*, is sometimes recessive and sometimes dominant. The inherited tendency to color blindness also shows variable dominance, though very seldom. The frequency of this change to dominance in Leber's disease is influenced by racial differences, as is also the age at which the disease develops. Lossen's rule holds good.)
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43. Retro-Bulbar Neuritis

Rule of Inheritance: Irregular

(See also Section 42)

1862. **Sedgwick**. A case of hereditary amaurosis. *Med. Times and Gazette*, 1862-i., 309.
1873. **Prouff, Mathieu**. Sur une forme d'atrophie papillaire observée chez plusieurs membres d'une même famille. Thèse de Paris. Quoted by Hormuth.
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1887. **Gevers, Hermann.** Zur Symptomatologie der eigentlichen, nicht durch Intoxikation bedingten retrobulbären Neuritis. Inaug. Diss. Berlin.
1888. **Thompson.** Fall von hereditären Amblyopia Neuritis. Deutsch. med. Wochenschr. Quoted by Hormuth.
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1895. **Dodd, O.** Hereditary retrobulbar neuritis. Annals of Ophthalmology, p. 300.
1899. **Brisson.** Etude de la névrite optique rétrobulbaire, familiale et héréditaire. Thèse de Paris.
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1902. **Wetz.** Zur Statistik der Neuritis optica u. s. w. Inaug. Diss. Giessen. Abst. in Nagel's Jahresbericht.
1912. **Ducamp.** Un cas de névrite rétrobulbaire familiale. (Soc. d'opht. de Paris.) Annal. d'Oculist, T. CXLVIII, p. 48; et Clinique Opht., p. 391.
1913. **Onishi.** Hereditary Optic Neuritis. Nippon Gank. Zasshi, Nov.
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1915. **Kuhk.** Hereditary Retrobulbar Optic Neuritis. Marburg Thesis, 1914. Klin. M. f. Augenh., 54, p. 103.
1915. **Posay, W. C.** Hereditary Form of Retrobulbar Neuritis (Leber's Disease). Phila. Polyclin., Ophth. Soc., Jan. 14; Amer. Jour. Ophth., 32, p. 81.

44. Optic Nerve Coloboma

Rule of Inheritance: Probably Dominant

1890. **Weyert, F.** Zur Heredität der Opticuscolobome. Klin. Monatsbl. f. Augenheilk., S. 325.
1894. **Müller-Kannberg.** Zur Casuistik der Opticuscolobome. Klin. Monatsbl. f. Augenheilk., S. 175.
1914. **Claiborne, J. H.** Partial Coloboma of Head of Optic Nerve. Arch. of Ophth., v. 43, p. 270.
1914. **Kraupa, E.** Pit-shaped Ectasia of Fundus. (1 ill., bibl.) Zeit. f. Augenh., v. 31, p. 149.
1915. **Chance, B.** Coloboma of Optic Nerve. Tr. Coll. Phys. Phila., 36, p. 317.
1915. **Crampton, G. S.** Coloboma Surrounding Optic Nerve with Retained Hyaloid Artery. Tr. Coll. Phys. Phila., 36, p. 308.
1917. **Takashashi.** Coloboma of Optic Nerve. (1 ill.) Nippon Gank. Zasshi, Jan., 1917.
1917. **Velter, E.** Coloboma of Optic Nerve. (1 pl., 1 ill.) Arch. d'Opht., v. 35, p. 335.

45. Sympathetic Nerve Lesions

Rule of Inheritance: Undetermined

1876. **Dupuy, Eugene.** Note on inherited effects of lesions of the sympathetic nerve and corpora rectiformia on the eye. Report of the Fifth Internat. Ophth. Congress, pages 252-255.

46. Muscular Anomalies

Rule of Inheritance: Mostly Dominant

(See also Section 13)

1875. **v. Graefe, A.** Motilitätsstörungen. Handbuch d. ges. Augenheilk. v. Graefe u. Saemisch, VI, 9, S. 1-256.
1879. **Heuck, G.** Ueber angeborenen vererbten Beweglichkeits-Defect der Augen. Klin. Monatsbl. f. Augenheilk., S. 253.
1882. **Uhthoff, Wilhelm.** Jahresbericht über die Wirksamkeit der Augenklinik von Prof. Schoeler zu Berlin im Jahre 1881. Berlin, S. 19.
1885. **Harlan, G. C.** Congenital paresis of both external muscles. Trans. Amer. Ophthal. Soc., 21st Meeting, p. 48.
1885. **Rampoldi, R.** Tre casi di blefaratopsi congenita atrofica. Ann. di Ottalm., XV, p. 49. Abst. in Nagel's Jahresbericht.
1887. **Rampoldi, R.** Assenza congenita ereditaria dei movimenti oculopalpebrali. Ann. di Ottalm., XVI, p. 51. Abst. in Nagel's Jahresbericht.
1887. **Rohde, R.** Augenmuskellähmungen. Diss.
1889. **Günzburg, F.** Kasuistik der angeborenen Muskelanomalien. Klin. Monatsbl. f. Augenheilk., S. 263.
1899. **Wilbrand u. Saeger.** Die Neurologie des Auges. Wiesbaden, S. 82 bis 96.
1907. **Howe, Lucien.** Influence of Heredity on Ocular Muscles. The Muscles of the Eye, vol. I, p. 54. N. Y.: G. P. Putnam's Sons.
1910. **Gebb und Voss.** Klinischer Beitrag zur Kenntniss der angeborenen hereditären Augenmuskellähmungen. Berlin klin. Wochenschr., Nr. 21.
1916. **Griscom, J. M.** Congenital Paralysis of External Rectus with Paresis of Internal Rectus and Retraction Movements of Eyeball. Trans. Coll. Phys. Philadelphia, v. 37, p. 415.
1917. **Zentmayer, W.** Family Congenital Palsy of External Rectus Muscle. Trans. Coll. Phys. Phila., v. 38, p. 355.
1922. **Münch.** Über Anisometropie bei einigen Zwillingen. Ber. über d. 43. Vers. d. dtsh. ophth. Ges., Jena, Sitzg., v. 8-10, VI, 1922, S. 241-245.
1926. **Franceschetti, A.** Über doppelseitige, kongenitale (familiäre) Trochlearislähmung und ihre Beziehung zur alternierenden Hyperphorie. (On bilateral, congenital, family paralysis of the trochlearis and its relation to alternating hyperphoria.) Ztschr. f. Augenhk., 59: 17-34, 2 photos., 4 diags., bibl. (Grandmother and granddaughter have bilateral congenital paresis of the trochlearis of a markedly concomitant character. Mother has a simple strabismus concomitans. Conditions in first two cases analogous to the third case with its essential alternating hyperphoria.)

47. Heterotropia

Rule of Inheritance: Irregular

(See also Section 46)

1899. **Zweig**. Casuistische Beiträge zur Lehre von den angeborenen Beweglichkeits-defecten der Augen. Deut. Beiträge z. prakt. Augenheilk., H. 41, S. 21.
1901. **Wolff, H.** Ueber Refraktionsbewegungen des Augapfels bei angeborenen Defecten der ausseren Augenmuskeln. Arch. f. Augenheilk., XLIV, S. 79. Abst. in Nagel's Jahresbericht.
1904. **Cohn, H.** Ueber Vererbung und Behandlung des Schielen. Berlin klin. Wochenschr., No. 40.
1908. **Reber, W.** Some facts concerning family exophoria. ["Studied seven families with fifty-six members, covering two generations. Of 40 examined, 34 were exophoric."] Ophthalmic Record, vol. XVII, p. 621. (Charts.)
1912. **Peters, A.** Monolateral amblyopia of hereditary strabismus probably the result of an imperfection area. Lancet, Jan. 13, p. 108.
1914. **Chatelin, C.** Hereditary Malformation of Chin and Nose with Exophthalmos and Strabismus. Ann. de Med., July 11.
1915. **Reber, W.** Heredity in Development of Strabismus. Ophth. Rec., 24, p. 59.
1922. **Peters.** Über die Bedeutung der Erbllichkeit des Schielens. (Vers. Nordwestdtsh. Augenärzte, Rostock, Sitzg., v. 11, III, 1922.) Klin. Monatsbl. f. Augenheilk., Bd. 68, März-H., S. 392.
1923. **Clausen, W., und Bauer, J.** Beiträge und Gedanken zur Lehre von der Vererbung des Strabismus concomitans. (Univ.-Augenklin., Halle.) Zeitschr. f. Augenheilk., Bd. 50, H. 5/6, S. 313-334.
1923. **Czellitzer, Arthur.** Wie vererbt sich Schielen? Arch. f. Rassen- und Gesellschafts-Biol., Bd. 14, H. 4, S. 377-394.

48. Nystagmus

Rule of Inheritance: Usually Dominant but Sometimes Sex Linked

(See also Sections 11, 17, 26, 49)

1882. **Owen, D. C. L.** An illustration of hereditary nystagmus. Ophth. Review, p. 239. (Chart.)
1892. **Alt, Adolf.** Note on congenital nystagmus. Amer. Journ. of Ophthal., p. 149.
1892. **Gowers, W. R.** Handbuch der Nervenkrankheiten. Autorisierte deutsche Ausgabe v. Dr. Karl Grube, Bonn, I, S. 468-476.
1892. **Wood, C. A.** A picture of hereditary nystagmus. Amer. Journ. of Ophthal., p. 146. (Chart.)
1893. **Boulland.** Nystagmus héréditaire. Recueil d'ophtal., p. 569.
1893. **Hervouët.** Nystagmus et sclérose en plaques avec hérédité. Rec. d. opht., p. 694.
1895. **Audeoud, H.** Note sur le nystagmus familial. Annal. d'Oculist, T. CXIII, p. 412. (Chart.)
1895. **Burton.** Hereditary congenital nystagmus. Lancet, II, p. 1497.
1895. **Kunn, C.** Die angeborenen Beweglichkeitsdefekte der Augen. Deutschmann's Beiträge z. Augenheilk., XIX, S. 1; and XXI, S. 21.
1897. **Meyer, A.** The morbid anatomy of a case of hereditary ataxy (with an introduction by Dr. Langer-Brown).

1898. **Morton, H. McI.** A nystagmic family. *Ophth. Record*, p. 28. (Chart.)
1902. **Fisher, H.** Congenital nystagmus in father and child. *Brit. Med. Journ.*, Sept. 6th.
1903. **Clarke, Ernest.** Hereditary nystagmus. *The Ophthalmoscope*, I, p. 86. Abst. in *Nagel's Jahresbericht*.
1903. **Sinclair, M.** Nystagmus as a family peculiarity. *Brit. Med. Journal*, I, p. 1204.
1906. **Zenoble et Aubineau.** Une variété nouvelle de myoclonie congénitale pouvant être héréditaire et familiale, à nystagmus constant. (Nystagmus-Myoklonie.) *Revue de méd.*, Nr. 6.
1908. **Caspar.** Ein Fall von vererbtem Augenzittern. *Centralbl. f. prakt. Augenheilk.*, Juli.
1908. **Lanz, J.** Hereditary nystagmus in five generations. *Nederlandsch. Tijdschr. v. Geneesk. Tweede Helft.*, p. 343. Quoted by E. Nettleship, *Trans. of the Ophthal. Society of the United Kingd.*, vol. XXXI, 1911, p. 175. (Chart.)
1909. **Radloff, A.** Hereditary nystagmus. In his Inaugural Dissertation, "Ueber familiären Nystagmus," Rostock. Quoted by E. Nettleship, *Trans. of the Ophthal. Society of the United Kingd.*, vol. XXXI, 1911, p. 176. (Chart.) Abstract in *Klin. Monatsbl. f. Augenheilkunde*, May, p. 726, 1910.
1911. **Gunn, R. Marcus.** Hereditary nystagmus. *Trans. of the Ophthal. Soc. of the United Kingd.*, vol. XXXI, p. 177. (Chart.)
1911. **Hancock, Ilbert.** Hereditary nystagmus. *Royal London Ophthalmic Hospital Reports*, vol. XVII, p. 113. (Chart.)
1911. **Lenoble, E., and Aubineau, E.** Myoclonic nystagmus. *Revue de Méd.*, March 10; and *Ophthalmoscope*, vol. IX, p. 802. (No chart.)
1911. **Nettleship, E.** On hereditary nystagmus. *Ophth. Review*, p. 191.
1911. **Nettleship, E.** Cases of hereditary nystagmus; thirteen pedigrees of which four were new. *Trans. Ophthal. Soc. of Un. Kingd.*, vol. XXXI, p. 59.
1912. **Nodop, H.** Ueber hereditären Nystagmus. *Inaug. Diss. Leipzig*.
1913. **Dubois, H. F.** Héréditaire nystagmus. *Nederl. Tijdschr. v. Geneesk.*, I, p. 66.
1914. **Cockayne, E. A.** Hereditary Nystagmus. *Proc. Roy. Soc. Med.*, Feb. 26.
1915. **Engelhard, C. F.** Hereditary Family Nystagmus. *Zeit. f. d. Ges. Neurol. u. Psychiat.*, Orig., v. 28, p. 319. *Klin. Monatsbl. f. Augenh.*, v. 54, p. 696.
1915. **Niccol, W.** Pedigree of Hereditary Nystagmus. *Ophthalmoscope*, 13, p. 224.
1922. **Papillon, P. H., et Lestoquoy, Ch.** Nystagmus congénital et familial, avec albinisme. (Présentation du malade.) (Kongenitaler und familiärer Nystagmus mit Albinismus. [Krankenvorstellung.]) *Bull. de la soc. de pédiatr. de Paris*, Jg. 1922, Nr. 4, S. 128-130.
1926. **Holm, E.** Hereditary nystagmus. *Acta Ophthalmologica*, 4 (1): 20-27, 2 ped. charts, 2 figs. (Two cases [boys] of congenital nystagmus each with a typical recessive sex-limited descent. Nystagmus congenita hereditaria due to a defect in the development of the eye and ensuing amblyopia.)

1927. **Hemmes, G. D.** Über die Genese des hereditären Nystagmus. (On the origin of hereditary nystagmus.) *Ztschr. f. Augenhlk.*, 58: 413-418. (Theory: Defective functioning of the otoliths results in congenital weakening of tonus of certain external eye muscles while tonus of others remains normal. Resultant attempt to restore tonus to normal.)
1927. **Koyanagi, Y.** Über den genetischen Zusammenhang zwischen dem hereditären Nystagmus und Bulbusalbinismus. (On the genetic connection between hereditary nystagmus and albinism of the eyeball.) *Klin. Monatsbl. f. Augenhlk.*, 79 (1): 43-48, 1 fig. (In clinical symptoms, complications, and heredity, hereditary nystagmus shows extensive similarity to albinism of the bulb. It seems unnecessary to make sharp genetic separation of the two diseases from each other.)

49. Nystagmic Head Movements

Rule of Inheritance: Probably Dominant

1878. **Friedrich.** Nystagmus bei Ataxie. Bericht über die II. Vers. d. ophth. Ges. zu Heidelberg, S. 198-203.
1879. **Seeligmüller.** Hereditäre Ataxie mit Nystagmus. *Arch. f. Psychiatrie u. Nervenkrankheiten*, X, I, S. 222.
1894. **Lewi, Emily.** Rhythmic head-movements associated with nystagmus occurring in infants and young children. *Med. News*, Philadelphia, p. 512.
1895. **M'Gillivray, Angus.** Hereditary congenital nystagmus associated with head movements. *Ophth. Review*, p. 252.
1904. **Motolese, F.** Due casi di paralisi congenita doppia di tutti i muscoli extrinseci dell'occhio in due persone della stessa famiglia. *Ann. di Ottalm. e Lav. della Clinica Oculista di Napoli*, XXXIII, p. 107. *Abst. in Nagel's Jahresbericht*, 1904.
1917. **Yawger, N. S.** Familial head nystagmus in four generations associated with ocular nystagmus. *Journal A. M. A.*, vol. LXIX, No. 10, p. 773.

50. Retractive Movements

Rule of Inheritance: Irregular

1900. **Wolff, Julius.** The occurrence of retraction movements of the eyeball together with congenital defects in the external ocular muscles. *Arch. of Ophthal.*, p. 297.
1914. **Green, J., Jr.** Retraction Movements of the Eyes; Acquired and Congenital. *Amer. Acad. Ophth. and Oto-Laryngology*, 1913, p. 358.

51. Ophthalmoplegia

Rule of Inheritance: Irregular; Usually Dominant

(See also Section 6)

1887. **Lawford, J. B.** Congenital defect of external ocular muscles. *Lancet*, II, p. 1222. *Ophthalmic Rev.*, p. 363.
1893. **Gunn, M.** Congenital ophthalmoplegia externa in two brothers. *Trans. of the Ophthal. Soc. of the United Kingdom*, XIII, p. 150.
1894. **Dujardin.** Ptosis congénital double avec ophthalmoplégie partielle. *Journal des Scienc. Méd.*, p. 561.

1894. **Gazépy.** Deux cas d'ophtalmoplégie congénitale externe. *Arch. d'opht.*, XIV, p. 273.
1895. **Guende.** Trois cas d'ophtalmoplégie extrinsèque congénitale. *Recueil d'opht.*, p. 345.
1895. **Schiler.** Augenmuskellahmung durch drei Generationen vererbt. *Würtm. ärzt. Correspondensbl.*, No. 4.
1896. **Gourfein.** Un case de double ophtalmoplégie extérieure congénitale et héréditaire chez six membres de la même famille. *Revue méd. de la Suisse romande*, Dec. 20.
1896. **Panas.** Double ophtalmoplégie extérieure et héréditaire chez six malade de la même famille. *Ann. d'Oculist*, T. CXVI, p. 447. *Arch. d'Opht.*, XVI, p. 721.
1897. **Pflüger, E.** Doppelseitiger kongenitale externe Ophthalmoplegie. *Correspon. Blatt f. Schweizer Aerzte*, No. 11. *Abst. in Nagel's Jahresbericht*.
1900. **Beaumont, W. N.** Family tendency to ophthalmoplegia externa. *Ophthalmic Review*, p. 116. *Ophth. Klinik*, IV, S. 130.
1901. **Heard, C. F.** Hereditary binocular ophthalmoplegia. *Ophthal. Record*, p. 404.
1905. **Pagniez.** Ophthalmoplegie externe congénitale et héréditaire. *Revue Générale d'Opht.*, p. 468.
1912. **Bradburne, A. A.** Hereditary ophthalmoplegia in five generations. *Trans. of the Ophth. Society of the United Kingd.*, vol. XXXII, p. 142; and *Ophth. Review*, p. 91. (Chart.)
1912. **Caillaud, M.** Ophtalmoplégie externe bilatérale congénitale et héréditaire. (*Soc. d'Opht. de Paris.*) *Annal. d'Oculist*, T. CXLVII, p. 303; et *Clinique Opht.*, p. 215.
1918. *Etiology of Congenital Ophthalmoplegia.* *New York Med. Jour.*, v. 107, p. 992.
1921. **Fiorenza, Ignazio.** Contributo alla conoscenza dell'oftalmoplegia nucleare congenita a tipo familiäre. (Beitrag zur Kenntnis der nucleären, kongenitalen Ophthalmoplegie vom familiären Typus.) (*Inst. di clin. pediatri.*, Univ. Palermo.) *Boll. d. clin.*, Jg. 38, Nr. 6, S. 174-179; *Pediatrics*, Bd. 29, H. 5, S. 200-208.
1921. **Schaffer, Karl.** Beiträge zur Lehre der cerebellaren Heredodegeneration. (*Hirnhistol. u. interakad. Hirnforschungs-inst.*, Univ. Budapest.) *Journ. f. Psychol. u. Neurol.*, Bd. 27, H. 1/2, S. 12-81.
1922. **Pinard, Marcel, et Béthoux.** A propos d'un cas d'ophtalmoplégie externe héréditaire et familiale. (Ein Fall von erblicher familiärer Ophthalmoplegia externa.) *Bull. et mém. de la soc. méd. des hôp. de Paris*, Jg. 38, Nr. 10, S. 483-486.
1926. **Aurand.** Ophthalmoplégie externe congénitale bilatéral et familiale. (Congenital and familial bilateral external ophthalmoplegia.) *Ann. d'oculistique*, 163: 222-223. (Two sisters. Ptosis in other female members of family.)

52. Ptosis

Rule of Inheritance: Dominant

(See also Sections 4, 6, 51)

1892. **Vossius, A.** Zwei Fälle von angeborener, fast vollständiger Unbeweglichkeit beider Augen und der oberen Augenlider. *Deutschmann's Beiträge z. Augenheilk.*, V, S. 1.
1899. **Münden.** Ein Fall von erworbener und vererbter Ptosis palpebrarum. *Deutsch. med. Wochenschr.*, S. 164. Quoted by Groenouw.

1902. **Selenkowski.** Ein Fall von angeborener, wahrscheinlich hereditärer Ptosis. (St. Petersb. ophth. Gesellsch.) Wratsch. Gaz., 44, p. 1022.
1911. **Hüttemann, R.** Ueber Ptosis congenita mit Heredität. v. Graefe's Arch. f. Ophth., LXXX, S. 280.
1913. **Addario la Ferla, G.** Blefaroptosi bilaterale congenital ereditaria. Nota clinica. Annal. di Ottalm., XLII, p. 372.
1913. **Ginzburg, J.** Zur Kasuistik der Ptosis congenita mit kollateraler Vererbung. Klin. Monatsbl. f. Augenheilk., LI, Bd. I, S. 455.
1916. **Heed, C. R.** Inheritance of Congenital Ptosis of Eyelid. Jour. Amer. Med. Assn., v. 66, p. 1553.
1921. **Dimitry, T. J.** Hereditary Ptosis. (Hereditäre Ptosis.) Amer. Jour. of Ophthalmol., vol. 4, No. 9, p. 655-658.
1923. **Boulanger, Alfred.** Le ptosis tardif familial. (Familiäre Ptosis.) Clin. opht., Bd. 12, Nr. 12, S. 679-685.
1923. **Killian, H.** Ein Fall von Ptosis hereditaria des Lides. Klin. Wochenschr., Jg. 2, Nr. 50, S. 2286.
1926. **Bartók, E.** Vererbung der Ptosis des einen unteren Augenlides durch drei Generationen. (Inheritance of ptosis of the lower eyelid through three generations.) Klin. Monatsbl. f. Augenheilk., 76: 496-499. (Grandmother, mother and son.)

53. Lagophthalmos

Rule of Inheritance: Dominant

(See also Section 4)

1916. **Peters, R.** Congenital Lagophthalmos in Four Generations. Klin. Monatsbl. f. Augenheilk., v. 55, p. 308. Ophthalmology, v. 12, p. 739.

54. Sarcoma

Rule of Inheritance: Usually Dominant

1892. **Silcox, A. G.** Hereditary sarcoma of eyeball in 3 generations. British Med. Journ., I, p. 1079.

55. Glioma

Rule of Inheritance: Irregularly Dominant

1885. **McGregor, A.** Glioma of the retina, three cases in a family of five. Medical Times, II, p. 45. Abst. in Nagel's Jahresbericht.
1917. **Griffith, A. H.** Hereditary Glioma of Retina. (Bibl.) Brit. Med. Jour., June 23, p. 850.
1917. **Griffith, A. H.** Hereditary Glioma of Retina. (Bibl.) Brit. Jour. Ophth., v. I, p. 529.

56. Mendelism and the Eye

(See also Section 39)

1911. **Lutz, Anton.** Ueber einige Stammbäume und die Anwendung der Mendel'schen Regeln auf die Ophthalmologie. v. Graefe's Arch. f. Ophth., LXXIX, S. 393.
1914. **Church, B. F.** Mendelian Law and Its Relation to Inherited Conditions of Eye. Calif. State Med. Jour., v. 12, p. 506.

1916. Buxton, L. H. Mendelian Dominant Inheritance of Cataract and Ectopia Lentis. *South. Med. Journ.*, v. 9, p. 933.

57. Mental Disease and Eye Defects

Rule of Inheritance: Irregular

1897. Koplik. A fatal disease of infancy with paresis or paralysis accompanied by idiocy or imbecility and progressive blindness with symmetrical changes in the macula lutea, with report of two cases of amaurotic family idiocy of Sachs. *Arch. of Pediatrics*, p. 736.
1898. Holden, Ward A. Pathological report on the eyes of Dr. Hirsch's patient with amaurotic family idiocy. *Journ. of Nerv. and Ment. Disease*, XXV, p. 550.
1898. Jacobi. Three cases of amaurotic family idiocy. *Arch. f. Pediatr.*, Nr. 8.
1898. Pëterson, Fr. A case of amaurotic family idiocy with autopsy. *Journ. of Nerv. and Ment. Disease*, XXV, p. 529.
1898. Sachs, M. Die amaurotische familiäre Idiotie. *Deutsche med. Wochenschr.*, Nr. 3.
1899. Mohr, M. Ueber Idiotia amaurotica familiaris Sachs. (Ungarisch.) *Orvosi Hetilap Szemészet*, Nr. 1-2.
1900. Mohr, M. Die Sachs'sche amaurotische familiäre Idiotie. *Arch. f. Augenheilk.*, XLI, S. 285.
1902. Colton. Amaurotic family idiocy. *Arch. of Pediatrics*, Jan.
1909. Ichikawa, K. Ueber eine der amaurotischen familiären Idiotie verwandte Krankheit. *Klin. Monatsbl. f. Augenheilk.*, XLVII, Bd. I, S. 73.
1912. Baildon, Francis J. Amaurotic family idiocy. (*Liverpool Medico-Chirurg. Journ.*, July.) *Ophthalmoscope*, vol. XI, p. 108, 1913.
1912. Gifford, H. A case of the juvenile form of family amaurotic idiocy. *Ophthalmic Record*, p. 577, Nov. (Chart.)
1912. Ochi. Amaurotic Family Idiocy. "Reports a typical case of Tay-Sachs disease." *Nippon Gank. Zasshi*, Nov., with Bibl.
1912. Sheffield, H. B. [Has recorded the case of a Hebrew child—developed the characteristic fundus changes with blindness and idiocy.] *N. Y. Med. Record*, p. 165, Jan. 27.
1912. Smith, R. M. Two cases of amaurotic hereditary and family idiocy—in Hebrews. *Boston Med. and Surg. Jour.*, p. 370, Mar. 7.
1913. Anglade, D. Idiotie amaurotique familiale. *Gaz. hebdom. des Scienc. med. de Bordeaux*, 30 mars.
1913. Hymanson, A. Metabolism studies of amaurotic family idiocy, with clinical and pathological observations. *Arch. of Pediatrics*, November, XXI, Nr. 11.
1913. Lidbetter, E. J., and Nettleship, E. On a pedigree showing both insanity and complicated eye diseases; anticipation of the mental disease in successive generations. *Brain*, vol. XXXV, Part 3, p. 195. (Important.)
1914. Hymanson, A. Amaurotic Family Idiocy. *Arch. of Pediatr.*, v. 30, No. 11.
1915. Cockayne and Attlee. Amaurotic Family Idiocy. *Roy. Soc. Med., Sec. on Ophth.*, Feb. 3. *Ophth. Rev.*, 34, p. 90.
1915. Coriat, I. H. Amaurotic Family Idiocy. *Boston Med. and Surg. Journ.*, July. *Amer. Jour. of Ophth.*, v. 32, p. 379.
1915. De Bruin, J. Amaurotic Family Idiocy. *Tijdschr. v. Geneesk.*, Jan. 30, 1915. *Ophthalmology*, v. 12, p. 117.

1915. **Herrmann, C.** Amaurotic Family Idiocy in One of Twins. Arch. of Ped., v. 32, p. 902.
1915. **Tyson, H. H.** Amaurotic Family Idiocy. Arch. of Ophth., v. 44, p. 447.
1915. **Wolfsohn, J. M.** Amaurotic Family Idiocy. Arch. of Int. Med., v. 16, No. 2. Journ. Amer. Med. Assn., v. 65, p. 826.
1916. **Batten, F. E., and Jukes, M. A.** Amaurotic Family Idiocy. Roy. Soc. Med., v. 8, Sec. on Dis. Children, p. 89.
1916. **Coats, G.** Cause of Ophthalmoscopic Appearances in Amaurotic Family Idiocy. Roy. Soc. Med., Ophth. Sec., Feb. 2. Ophth. Rev., v. 35, p. 62.
1916. **Shabad, I. A.** Familial Progressive Amaurotic Idiocy. Russky Vrach, v. 15, p. 775. Jour. Amer. Med. Assn., v. 67, p. 1481.
1917. **Bernstein, E. J.** Amaurotic Family Idiocy; Bilateral Blindness. Med. Rec., v. 92, p. 1074.
1917. **Epstein, J.** Amaurotic Family Idiocy. Med. Rec., v. 106, p. 887.
1917. **Leonard, E. F.** Amaurotic Family Idiocy. Ill. Med. Jour., v. 31, p. 327.
1917. **McHenry, J. H.** Amaurotic Family Idiocy. (4 ill., bibl.) Arch. of Pediat., v. 34, p. 161.
1917. **Rand, C. W.** Amaurotic Family Idiocy. Calif. State Jour. Med., v. 15, p. 503.
1917. **Welt-Kakels, S.** Amaurotic Family Idiocy. Med. Rec., Nov. 17, p. 874.
1917. **Winkler, C.** Amaurotic Idiocy. Nederl. Tijdschr. v. Geneesk., p. 663. Abstract in Arch. d'Ophth., v. 36, p. 59.
1917. **Wood, C. A.** Eye Signs of Mongolian Idiocy. Ophth. Rec., v. 26, p. 226.
1918. **Brandeis, J. W.** Amaurotic Family Idiocy. New York Med. Jour., v. 107, p. 121.
1918. **Naville, F.** Amaurotic Family Idiocy. Abst. Jour. Amer. Med. Assn., v. 71, p. 74.
1918. **Talbot, F. B.** Amaurotic Family Idiocy. Amer. Jour. Dis. Children, v. 16, p. 39.
1918. **Westphal, A.** Amaurotic Family Idiocy. Münch. med. Woch., Jan., 1918, p. 81. Abst. Klin. M. f. Augenh., v. 60, p. 130.
1923. **Cohen, Martin.** Report of a case of amaurotic family idiocy in an infant of non-Jewish parentage. (Ein Fall von familiärer amaurotischer Idiotie bei einem Nichtjuden.) Arch. of Ophth., vol. 52, No. 2, p. 140-146.
1923. **Eleonskaja, W. N.** Anatomische Veränderungen des Sehapparates bei Idiotia amaurotica familiaris (Typus Tay-Sachs). (Augen-klinik, Petersburg.) (Wratschebnaja gaseta, Nr. 17/18, S. 399-402. (Russisch.)
1923. **Frets, G. P., und Overbosch, J. F. A.** Ein Fall von früh-jueniler familiärer amaurotischer Idiotie. (Nederlandsch. Tijdschr. v. Geneesk., Jg. 67, 2. Hälfte, Nr. 11, S. 1091-1111. (Holländisch.)
1923. **Globus, J. H.** Ein Beitrag zur Histopathologie der amaurotischen Idiotie. (Mit besonderer Berücksichtigung der Beziehungen zu den hereditären Kleinhirnerkrankungen und zur Merzbacher-Pelizaesschen Krankheit.) (Path. Dep. Mt. Sinai Hosp., New York, u. Staatskrankenanst u. Psychiatr. Univ. Klin. Hamburg-Friedrichsberg.) Zeitschr. f. d. ges. Neur. u. Psych., Bd. 85, H. 4/5, s. 424.

1923. Hay, Percival J., and Naish, A. E. Familial cerebro-retinal degeneration (juvenile Tay-Sachs disease) in three members of a family of seven. (Familiäre cerebro-retinale Degeneration [juvenile Tay-Sachssche Erkrankung] bei drei von sieben Familienmitgliedern.) (North of Engl. Ophth. Soc., Sheffield, 17, XI, 1922.) Transact. of the Ophth. Soc. of the United Kingdom, vol. 43, p. 654-656.
1923. Levy, A. H. Case of amaurotic family idiocy. (Fall von familiärer amaurotischer Idiotie.) Proc. Roy. Soc. Med., vol. 16, No. 7, Sect. of Ophth., p. 17-18.
1923. Marinesco, G., et Radovici, A. Idiotie amaurotique et rigidité décérébrée. (Amaurotische Idiotie und "rigidité décérébrée.") Encéphale, Jg. 18, Nr. 3, S. 145-156.
1923. Nikula, A. Die heredodegenerativen Erkrankungen und das Verhältnis der familiären amaurotischen Idiotie zu denselben. Duodecim, Jg. 39, Nr. 1, S. 15-26. (Finnisch.)
1923. Schaffer, Charles. Contributions a l'histopathologie des ganglions rachidiens dans l'idiotie amaurotique (type Tay-Sachs). (Beiträge von Histopathologie der Spinalganglien bei der amaurotischen Idiotie [Typus Tay-Sachs].) (Laborat. inst. neurol., Univ. Budapest.) Trabajos del laborat. de invest. biol. de la univ. de Madrid, Bd. 20, H. 3/4, S. 81-91.
1923. Tschugunoff, S. Zur Histopathologie der infantil-amaurotischen Idiotie. (Neurol. Institut, Univ. Moskau.) Arch. f. Psychiatrie u. Nervenkrankheit, Bd. 69, H. 4, S. 461-487.

58. Eugenics and Eye Defects

(See also Section 3)

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